

ORCHIDACEAE NOVAE MALAYENSES. XIII.

Auctore

J. J. SMITH.

Habenaria spathiphylla J. J. S. n. sp.

Rhizoma breve. *Caules* approximati, c. 11—17 cm longi, inferne vaginis c. 4 tubulosis superne sensim laminam parvam gerentibus, apice bifolii. *Folia* erecto-patentia, spathulato-oblongo-elliptica ad obovata, breviter vel breviuscule triangulo-acuminata, acuta, apiculata, basi sensim longe angustata, curvinervia, reticulato-venosa, costa media dorso carinata, sicco membranacea, c. 15—26 cm longa, 4.5—7 cm lata; vaginae tubulosae. *Inflorescentia* stricta, elongata, laxe multiflora, pedunculo c. 47—52 cm longo, vaginulis c. 5 foliaceis laxissimis superne decrescentibus et in bracteas vergentibus, rachide c. 16—22.5 cm longa. *Bractee* lanceolato-triangularae, sensim subulato-angustatae, acutissimae, margine papillosae, concavae, nervis 3 dorso prominentibus, praesertim costa media, ad c. 2 cm longae, 0.45 cm latae, superiores decrescentes. *Flores* quaquaversi, patentes, cum calcar c. 1.27 cm longi. *Sepalum dorsale* erectum, cum ovario angulum obtusum faciens, cum petalis galeiforme, valde concavum, ovatum, apice breviter contracto truncatum, dorso infra apicem minute apiculatum, nervis 3 dorso prominentibus, c. 0.5 cm longum, 0.28 cm latum. *Sepala lateralialia* deflexa, apice oblique revoluto marginibusque valde recurvis valde convexa, late oblique ovata, vix acuminata, obtusa, nervis 3 dorso prominentibus, c. 0.5 cm, margine antico 0.45 cm longa, basi 0.2 cm, supra basin 0.3 cm lata. *Petala* sepalo dorsali agglutinata, e basi praesertim antice oblique quadrangulo-dilatata late lineari-producta subfalcata, obtusa, basi tantum inaequilatera, 1nervia, c. 0.5 cm longa, basi c. 0.2 cm, medio 0.08 cm lata. *Labellum* calcaratum; lamina breviter unguiculata, 3partita, incrassatione convexa ante calcaris faucem, c. 0.67 cm longa, ungue usque ad apicem ovarii c. 0.375 cm longo, laciniis lateralibus divergentibus, angulum acutum facientibus, patentibus, oblique linearibus, falcatulo-incurvulis, margine exteriori superne paululum dilatatis, anguste obtusis acutiusculisve, margine interiori c. 0.475 cm longis, c. 0.75—0.1 cm latis, lacinia intermedia lateralibus paulo brevior, recta, apice recurvula, lineari, apice angustata, obtusa, carnosa, supra convexa, semitereti, subtus longitudinaliter sulcata, c. 0.375 cm longa, 0.1 cm lata; calcar ovario parallelum, reversum, superne leviter clavatum et hamato-incurvum, obtusum, basi valde oblique infundibuliformi-ampliatum, inexplanatum c. 0.825 cm longum. *Gynostemium* breve, erectum, cum ovario angulum obtusum faciens,

c. 0.2 cm longum, auriculis subobovatis verruculosus. *Ovarium* elongatum, 6sulcatum, basi tortum, apice in rostrum c. 0.9 cm longum productum, totum c. 2.2 cm longum.

SUMATRA. West coast: Goenoeng Kerintji, 1800 m, in forest (H. A. B. BÜNNEMEIJER n.9488, 16 April 1920; „flowers light green, sepals dark green”).

Near *H. curvicalcar* J.J.S. from Java but with a longer stem and spatulate leaves, smaller flowers, much shorter laciniae of the lip, the lateral ones not acuminate and recurved at the tip, a shorter and thicker spur.

Dr. SCHLECHTER united *H. undulata* J. J. S. with *Platanthera Susannae* LNDL. and some others in the genus *Pecteilis* RAF. In my opinion *H. undulata*, *H. curvicalcar* and the new species proposed here differ more from *Pecteilis* than from *Habenaria*. On the other hand I think that *Habenaria Medusa* KRZL. cannot be maintained under *Habenaria* but shows more affinity to *P. Susannae*. A future monographer of the genus *Habenaria* and its allies shall have to loose these questions.

Description from herbarium.

***Vrydagzynea kerintjiensis* J.J.S. n.sp.**

Caulis e basi decumbente radicante erectus, c. 24—28 cm longus, c. 7foliatus, foliis 5 superioribus approximatis. *Folia* oblique elliptica, falcatula, oblique triangulo-contracto-acuminata, acuta, apiculata, basi acute in petiolum contracta, curvinervia, costa media dorso carinata, c. 2.4—4.9 cm longa, 0.5—2.7 cm lata; petiolus tenuis, cum vagina ample tubulosa c. 0.5—1.5 cm longus. *Inflorescentia* erecta, densissime multiflora, saltem novella capituliformis, quaquaversa, cum floribus c. 2.2—2.5 cm. longa, 1.5 cm. diam. (macerata), pedunculo brevi, c. 1.4—1.8 cm longo, nonnullis vaginulis donato, cum rachide pubescenti. *Bracteae* conspicuae, oblongo-ovatae, apicem versus angustatae, obtusae vel subacutae, concavae, dorso sparse pubescentes, ciliatae, 1nerviae, ad c. 1.1 cm longae, absque ciliis fere 0.4 cm latae. *Flores* c. 0.925 cm longi, sepalis petalisque conniventibus. *Sepalum dorsale* petalis in unum valde concavum agglutinatum, e basi brevissime contractum anguste oblongum, concavum, in $\frac{3}{5}$ partibus supra basin leviter constrictum, 1nervium, parte inferiore oblonga cum marginibus subparallelis, dorso parce pubescenti, parte superiore carnosio-incrassata, obtusa, apice medio brevissime truncato-producta, c. 0.6 cm longum, fere 0.2 cm latum. *Sepala lateralia* oblique subovato-oblonga, concava, superne contracta valde carnosio-incrassata et valde concava, obtusa, margine antico basi dilatato calcar basi amplexentia, basi dorso parce puberula, c. 0.55 cm longa, 0.2—0.225 cm lata. *Petala* valde obliqua, inaequilatera, concava, ex ungue brevi oblique quadrangulo fere 0.1 cm longo latoque in laminam ambitu semiovatam margine antico rotundato-dilatata dimidio superiore fere quadrangula-contractam incrassatamque truncatam c. 0.375 cm longam 0.175 cm latam dilatata, 1nervia. *Labellum* calcaratum, totum 0.85 cm longum; lamina porrecta, gynostemium superans,

concava, subtus convexa, ambitu subovalis, leviter triloba, lobis lateralibus brevibus, erectis, gynostemio adpressis, rotundatis, lobo intermedio bene majore, marginibus superne abrupte dilatatis incurvis contiguis late cucullato, obtuso, c. 0.2 cm longo; calcar ovario parallelum, cum lamina angulum obtusum faciens, oblongum, antice vix ventricosum, obtusum vel fortasse subretusum, dorso c. 0.48 cm longum, glandulis 2 oblique globosis stipitatis in $\frac{1}{3}$ parte supra basin liberis $\frac{2}{3}$ partes supra basin attingentibus, instructum, dorso c. 0.48 cm longum. *Gynostemium* supra c. 0.25 cm, subtus 0.37 cm longum, dorso convexum, costis 2 longitudinalibus crassis postice paulum productis et V-formiter connatis subtus a stigmatibus decurrentibus, clinandrio alte exavato, antice utrinque supra stigmata in lobulum parvum porrectum stigmatibus brevius triangulum obtusum productum. *Anthera* cucullata, basi in clinandrium quadrans, altius cordata, lobulis bidentatis, apice contracta, obtusiuscula, connectivo infra antherae apicem in costulam prominulam terminante, bene 0.2 cm longa. *Pollinia* 2, clavata, glandula subovata, antice porrecta. *Rostellum* stigmata subaequans, obtusum. *Stigmata* 2, porrecta, triangula, antice oblique truncata, anguste obtusa. *Ovarium* sessile, tortum, 6sulcatum, ut videtur glabrum, c. 0.7 cm longum.

SUMATRA. West coast: Goenoeng Kerintji (H. A. B. BÜNNEMEIJER n.8786, 14 March 1920, 1550 m; n.9063, 21 March 1920; „flowers light rose coloured”).

Resembling a small *V. albida* BL. but with elliptic falcate leaves, much less contracted dorsal sepal, very different petals and the blade of the lip being relatively much shorter.

Description from a dried specimen.

***Hetaeria kerintjiensis* J. J. S. n. sp.**

Caulis e basi decumbente radicante c. 7 cm longa erectus, totus c. 19.5 cm longus, c. 7folius. *Folia* erecto-patentia, oblique oblongo-elliptica, apice angustata, anguste obtusa, grosse apiculata, basi acuta, nervis c. 5 majoribus nonnullisque minoribus curvatis, costa media dorso prominente, oblique reticulato-venosa, c. 6.75–7.75 cm longa, 2.3–2.6 cm lata; petiolus canaliculatus, cum vagina ample tubulosa c. 2.5–3.5 cm longus. *Inflorescentia* densius multiflora, quaquaversa, pedunculo sparse puberulo, c. 11 cm longo, vaginulis c. 3 tubulosis superioribus decrescentibus et in bracteas vergentibus donato, rachide brevissime patentissime puberula, c. 7 cm longa. *Bracteae* adpressae, ovatae, acuminatae, acutae, concavae, apice excepto sparse ciliatae, dorso brevissime sparse patentissime puberulae, 1nerviae, c. 0.8 cm longae, 0.5 cm latae. *Flores* c. 20, glabri, c. 0.6 cm longi, 0.46 cm lati, sepalis petalisque conniventibus. *Sepalum dorsale* horizontale, apice recurvulum, concavum, subovato-ovale, apice triangulo-contractum, obtusum, 1nervium, c. 0.53 cm longum, 0.34 cm latum. *Sepala lateral*ia porrecta, apice breviter recurvula, oblique ovata, apicem versus angustata, obtusa, bene concava, 1nervia, c. 0.53 cm longa, 0.34 cm lata. *Petala* sepalis dorsali aggluti-

nata, inaequilatera, oblique semielliptica, subfalcata, obtusiuscula, acute apiculata, concava, 1nervia, c. 0.55 cm longa, 0.3 cm lata. *Labellum* simplex, omnino exappendiculatum, porrectum, horizontale, apice recurvo sigmoideum, concavum, subtus canalicula longitudinali intus prominente superne evanescente, marginibus incurvis, explanatum e basi late cuneata ovatum, acutum, superne leviter irregulariter marginatum, 1nervium, c. 0.7 cm longum, 0.46 cm latum, textura petalorum. *Gynostemium* breve, latum, basi valde brevissimeque contractum et cum dorso clinandrii valde convexo angulum acutum faciens, bilabiato-partitum, labio superiore valde incurvo, intus concavo cum costula longitudinali, basi lato, orbiculari-ovato, antheram gerente, labio inferiore latiore porrecto, ambitu quinquangulari, subtus appendicibus 2 conspicuis porrectis divergentibus, incurvulis dentiformibus triangulis subacutis carnosulis stigma fere aequantibus instructo, totum c. 0.35 cm longum, 0.3 cm latum. *Anthera* cucullata, horizontalis, late alteque cordata, ambitu quinquangularis, acuta, lobulis basilaribus reversis rotundato-quadrangulis, parte mediana margine angusto excepto quinquangulari-cordato-incrassata, c. 0.27 cm longa, 0.225 cm lata. *Rostellum* porrectum, e basi lata triangulum, bidentatum. *Stigma* conspicuum, transversum, vallato-incrassatum, semilunatum, utroque latere in rostellum incurvum. *Ovarium* erecto-patens, sessile, apice breviter attenuato incurvum, vix tortum, glabrum, c. 1 cm longum.

SUMATRA. West coast: Goenoeng Kerintji, 2200 m, forest (H.A.B. BÜNNEMEIJER n. 9433, 15 April 1920; „bracts green, sepals brownish red, petals white, a little reddish”).

This is apparently a semipeloric form. The lip is quite nude and equally thin as the petals. The column shows the same modification as I have described with *Goodyera rosans* J.J.S. (in Bull. Jard. Bot. Buit. 3e sér. IX [1927], 36).

Description from a single dried specimen of which a portion of the inflorescence was preserved in alcohol.

Coelogyne (sect. Longifoliae) **trilobulata** J.J.S. n. sp.

Pseudobulbi approximati, ovoidei, inaequaliter rotundato-trigoni, c. 2.2—3.2 cm longi, 1.15 cm diam., 2folii, initio vaginis ad basin. *Folia* lanceolata, basi apiceque acuta, leviter laxè undulata, costa media supra canaliculata subtus prominente, coriacea, c. 7.5—9.5 cm longa, 1.3—1.5 cm lata; petiolus conduplicato-canaliculatus, sensim in laminam abiens, c. 1.3 cm longus. *Inflorescentia* in pseudobulbo maturo, sensim plures flores gignens, pedunculo tenui, nudo, c. 7.5—9 cm longo, rachide serpentina, lateraliter compressa, 12—21 cm vel plus longa, internodiis extus convexis, intus leviter convexis, apicem versus leviter incrassatis, c. 0.9—1 cm longis. *Bracteae* caducae, alternatim bifariae, involutae, initio apicem rachidis amplectentes, oblongo-triangularae, acutae, c. 2.1 cm. longae, 0.7 cm. latae. *Flores* 12—20 vel plures, singulatim expansi, c. 3.4 cm. lati, sepalis divergentibus. *Sepalum dorsale* ovato-lanceolatum, $\frac{1}{3}$ superiore leviter contractum, brevissime acute acumi-

tum, obtusangule concavum, 7nervium, c. 2.6 cm longum, 0.86 cm latum. *Sepala lateral*a anguste oblique ovato-lanceolata, apicem versus sensim angustata, acuta, angulato-concava, margine antico supra basin plicam formante basi subsaccata basin labelli amplectentia, 7nervia, costa media dorso obtuse prominente, c. 2.55 cm longa, 0.6 cm lata. *Petala* oblique linearia, apicem versus sensim angustata, apice minute bidentata, 3nervia, costa media dorso sulcata, c. 2.15 cm longa, basi 0.225 cm lata. *Labellum* arcuatum, 3lobum, basi breviter rotundato-saccatum, inexplanatum c. 2 cm longum, 5costatum, costis simplicibus glabris in sacco humilibus ante saccum paulum elevatis, costis exterioribus brevissimis, costa intermedia paulo longiore bene $\frac{1}{4}$ partem labelli longitudinis aequante, ceteris conspicuis superne magis elevatis extrorsum decumbentibus repandulis medium lobi intermedii vix attingentibus, explanatum c. 2.4 cm longum; lobi laterales erecti, basi lati, satis humiles, apice rotundato-producto vix recurvulo gynostemium superantes, hypochylium ambitu obovatum c. 1.2 cm longum 0.975 cm latum formantes; lobus intermedius multo major, subrectus, marginibus praesertim superne valde recurvis, explanatus e basi obverse aequilateraliter trapeziformi-quadratus, ambitu sexangulatus, margine subirregularis, apice truncato breviter 3lobulatus, lobulis exterioribus latis obtusis, lobulo intermedio aequilongo multo angustiore triangulo acuto, disco angusto superne valde convexo et canaliculis a marginibus valde convexis separato, c. 1.2 cm longus, basi 0.47 cm, superne 0.87 cm latus. *Gynostemium* vix curvulum, clavatum, a basi utrinque anguste patentissime alatum, ala in $\frac{2}{5}$ partibus superioribus dilatata recurvula antice leviter convexa superne utrinque in denticulum (auriculum) exeunte, ala apicali porrecta, cum apice gynostemii angulum obtusum faciente, brevi, transverse oblongo-quadrangula, truncata, vix repandula, c. 1 cm longum, pede brevi, cum ovario angulum subrectum faciente, basi gynostemii latiore, c. 0.17 cm longo. *Anthera* cucullata, 3lobulata, e basi transverse reniformi in lobulum conspicuum angustiore semiorbilarem retusum tenuem producta, thecis convexis, connectivo inter thecas breviter conico, c. 0.25 cm lata, 0.23 cm longa. *Pollinia* oblique ovalia, extus convexa, intus excavata. *Rostellum* magnum, recurvum, late rotundatum, subtricastatum. *Stigma* alte excavatum, semiovale, margine inferiore rotundato, valde elevato, revurvo, bilobulo. *Ovarium* oblique obconicum, acute 6costatum, 0.4 cm longum; pedicellus teres, c. 0.35 cm longus.

SUMATRA. West coast: Goenoeng Kerintji, 2200 m, epiphytical in forest (H. A. B. BÜNNEMEIJER n. 10090, 6 May 1920; „flowers light brown”; also liv. pl. cult. in Hort. Tjibodas; „flower shining transparently brown, lip less shining and transparent, reddish brown”).

In habit resembling *C. longifolia* LNDL. etc. but with distinct side lobes.

Description from herbarium and materials preserved in alcohol collected from a cultivated plant.

Dendrochilum (sect. *Monochlamys*) **ovatum** J. J. S. n. sp.

Rhizoma validum, elongatum, dependens, ramosum, teres, c. 58 cm longum, radicibus crassis in parte basali, internodiis c. 2.5—4 cm longis, sicco 0.3—0.4 cm diam., vaginis tubulosis, antice rumpentibus, dense prominenter nervosis, leviter furfuraceo-punctatis internodiis subaequilongis. *Pseudobulbi* c. 7—12 cm dissiti, rhizoma continui, sicco tenues valdeque rugosi, c. 2.4—3.2 cm longi. *Folium* petiolatum, oblique ovatum, sensim acuminatum, obtusiusculum vel acutiusculum, marginibus apice incurvis apiculatum, basi rotundata breviter in petiolum contractum, nervis c. 7—9 sicco utrinque prominentibus pluribusque tenuibus, sicco papyraceo-coriaceum, c. 5.5—12.5 cm longum, 1.7—5 cm latum; petiolus canaliculatus, c. 0.6—1.8 cm longus. *Inflorescentia* e pseudobulbo novello folio evoluto synantha, elongata, arcuata, elegans, laxa multiflora, pedunculo tenui, 3—7 cm longo, rachide leviter flexuosa, lateraliter compressa, quadrangula, faciebus angustis canaliculata, glabra, c. 13—19 cm longa, internodiis c. 0.3—0.5 cm longis. *Bractae* ovarium pedicellumque amplectentes et superantes, late ovatae, acutae, basi breviter contractae, 3nerviae, fusce furfuraceo-punctatae, c. 0.475 cm longae, 0.37 cm latae. *Flores* alternatim bifarii, c. 0.6 cm lati, 0.8—0.9 cm longi. *Sepalum dorsale* cum ovario angulum obtusum faciens, incurvulum, apice plusminusve recurvulum, anguste oblongum, breviter triangulo-acutatum, acutum, apiculatum, parte inferiore concavum cum marginibus convexis, 3nervium, nervis exterioribus medium sepali vix superantibus, c. 0.56 cm longum, fere 0.2 cm latum. *Sepala lateralialia* divergentia, oblique anguste subovato-oblonga, vix falcutula, apicem versus angustata, acuta, canaliculata cum lateribus convexis, 3nervia, costa media dorso prominente, c. 0.575 cm longa, 0.2 cm lata. *Petala* divergentia, oblique oblongo-elliptica, acuminata, acuta, erosula, concava, 3nervia, c. 0.5 cm longa, 0.225 cm lata. *Labellum* parvum, porrectum, gynostemium longe superans, leviter recurvulum, 3lobum, 3nervium, lamellis 2 remotis longitudinalibus erectis altis antice ante basi lobi in costulam brevem humilem abrupte terminantibus postice supra basin labelli rectangule incurvis continuisque sulco tantum separatis Uformibus, explanatum c. 0.35 cm longum; lobi laterales brevissimi, oblique erecti, margine recurvulo convexi, erosuli, apice brevissime dentiformi, hypochylium e basi brevissime unguiculata, semiorbiculare basi rotundatum bene 0.1 cm longum 0.175 cm latum formantes; lobus intermedius hypochylis bene major, leviter concavus, late ovatus, apicem versus angustatus, obtusus, crenulatus, intus minute papillosus, nervis ramulisque intus incrassatis carnosulus, fere 0.25 cm longus, 0.26 cm latus. *Gynostemium* breve, dorso angulato-convexum, c. 0.15 cm longum, 3alatum, alis lateralibus fere a medio liberis, porrectis, apice incurvis et sub ala apicali contiguus, explanatis alam apicalem superantibus, oblique late linearibus, obtusis, ala apicali lata, leviter concava, irregulariter lacinulata. *Anthera* cucullata, supra visa transverse ovalis, apice breviter bidentata, basi bilobulata, connectivo alte obtuse gibboso, fere 0.05 cm lata. *Rostellum* parvum, porrectum, apice sursum curvulum, triangulum. *Stigma*

orbiculare, margine elevatum. *Ovarium* 6sulcatum, c. 0.1—0.125 cm longum; pedicellus 0.125 cm longus.

SUMATRA. Pinto, 2100—2200 m, in open forest and coppice, epiphytical (J. A. LÖRZING n.8282, 22 January 1921).

In habit much resembling *D. adpressibulum* J. J. S. but with a quite different lip.

The colour of the flowers has not been noted.

Description from herbarium and flowers preserved in alcohol.

Calanthe (sect. *Calophrysus*) **taenioides** J. J. S. n. sp.

Rhizoma repens, vaginis mox fatiscentibus, radicibus crassiusculis. *Pseudobulbi* parvi, 1folii, nonnullis vaginis tubulosis superioribus accrescentibus ad c. 8.5—12.5 cm longis ad basin. *Folium* petiolatum, ellipticum, acuminatum, acutum, basi in petiolum acuminatum, supra glabrum, subtus puberulum, nervis c. 7 majoribus subtus prominentibus numerosisque tenuioribus, c. 16.5—20 cm longum, 7.2—6.7 cm latum, petiolus tenuiusculus, canaliculatus, dorso puberulus, 7nervius, cum vagina c. 10—15 cm longus. *Inflorescentia* basi vaginis inclusa, laxa satis multiflora, pedunculo dense patentissime puberulo, c. 22.5—34 cm longo, 1 vel paucis vaginulis parvis donato, rachide dense velutino-puberula, 7.5—8.5 cm longa. *Bractee* persistentes, reflexae, parvae, triangulae, acute acuminatae, dorso puberulae, ad c. 0.275—0.3 cm longae, superiores decrescentes. *Flores* c. 10—14, angusti, sepalis dorso dense patentissime intus laxius puberulis. *Sepalum dorsale* lineare, apicem versus sensim angustatum, acutiusculum, 5nervium, nervis exterioribus brevissimis, c. 1.25 cm longum, 0.2 cm latum. *Sepala lateralialia* oblique linearia, apicem versus sensim angustata, acuta, 3nervia, c. 1.33 cm longa, 0.2 cm lata. *Petala* tenuiora, linearia, apicem versus sensim angustata, acuta, extus sparse intus parce patentissime puberula, 3nervia, c. 1.15 cm longa, 0.12 cm lata. *Labellum* angustum, 3lobum, calcaratum, inferne longitudine bene 0.2 cm gynostemio adnatum, subtus patentissime puberulum, 3nervium, totum explanatum c. 1.26 cm longum, parte gynostemio adnata oblonga concava. parte libera (lamina) 0.8 cm, usque ad apicem loborum lateralium 0.36 cm longa, 3costata, costis glabris approximatis, exterioribus supra basin altam rotundatam decrescentibus humilibus in c. $\frac{1}{4}$ — $\frac{1}{3}$ supra basin lobi intermedii terminantibus, costa tertia humili ultra medium lobi intermedia producta; lobi laterales parvi, erecti, oblique trianguli, antice breviter acutiuscule vel obtusiuscule triangulo-producti, irregulariter marginati, mesochylium cuneato-quadrangulum superne 0.22 cm latum formantes; lobus intermedius multo longior, e basi breviter contracta oblongo-obovatus, apice utrinque rotundatus, lobulo satis conspicuo triangulo acuminato abrupte imposito, medio utrinque leviter exciso-constrictus, irregulariter crenulatus, c. 0.45 cm longus, basi 0.08 cm, superne bene 0.2 cm latus; calcar reversum, cum labello angulum rotundato-obtusum faciens, breve, oblongum, subtus visum conicum, obtusum cum costa longitudinali, sparse patentissime pu-

berulum, c. 0.25 cm longum. *Gynostemium* breve, crassum, facie inferiore tota longitudine labello adnatum, dorso sigmoideum, patentissime puberulum, c. 0.23 cm longum, lobis stigmaticis oblique quadrangulis, extus convexis, intus concavis. *Anthera* cucullata, breviter cordata, triangulo-rostrato-acuminata, obtusiuscula, c. 0.15 cm lata. *Capsula* immatura conspicue 6costata, dense patentissime puberula, c. 1.5 cm longa; pedicellus puberulus, c. 0.77 cm longus. *Capsulae* secundae, reflexae, saepe 2 approximatae.

SUMATRA. Piso-piso, north-west of Lake Toba, c. 1850 m, in forest, terrestrial, not rare (J. A. LÖRZING n.9410, 30 December 1922; „flowers white”).

A very distinct species of which I know no near ally. At first sight I thought to have to do with a *Tainia*. The flowers were in fruit probably owing to self fertilization, I could not find a rostellum.

Description from herbarium.

Eria (sect. *Aeridostachya*) **decurrentipetala** J. J. S. n. sp.

Pseudobulbi approximati, 1folii, pluribus vaginis alternatim bifariis articulatis erecto-patentibus imbricatis triangulis ad oblongo-triangulis acutis conduplicatis carinatis superioribus accrescentibus ad c. 11—12 cm longis coriaceis ad basin. *Folium* erectum, articulatum, lanceolato-loriforme, apice angustatum, suboblique obtusiusculum, basin versus angustatum conduplicatumque, supra in utroque latere costae mediae supra canaliculatae subtus obtuse elevatae convexum, ceteris nervis sicco supra tantum obtuse prominentibus, rigidissime coriaceum, c. 23 cm longum, 1.7—2.7 cm latum (sicco). *Inflorescentia* ex axilla vaginarum, erecta, dense multiflora, pedunculo parce adpresse brevissime stellato-puberulo, c. 18-20 cm. longo, nonnullis vaginulis minimis adpressis bracteiformibus donato, rachide brevissime hirtella, c. 13—16 cm longa. *Bractee* persistentes, minimae, patentissimae, pedicello adpressae, triangulae, acutae, concavae, tenues, c. 0.13 cm longae. *Flores* patentissimi, c. 0.6 cm lati, 0.775 cm longi, sepalis dorso parce puberulis. *Sepalum dorsale* cum ovario angulum obtusum vel subrectum faciens, incurvum, valde concavum, subovatum, apicem versus angustatum, obtusiusculum, 3nervium, c. 0.35 cm longum, 0.23 cm latum. *Sepala lateral*ia lacinia oblique oblonga concava ad pedem gynostemii decurrentia, mentum conspicuum cum ovario angulum acutum faciens oblongum apice inflatum oblique rotundatum c. 0.4 cm longum 0.2 cm latum formantia, parte antica recurva, oblique triangula, falcata, margine postico valde rotundata, obtusa, 3nervia, usque ad apicem ovarii 0.3 cm longa, margine antico bene 0.6 cm, basi 0.53 cm metientia. *Petala* patentissima, subrecurvula, basi lata ad pedem gynostemii decurrentia, oblique triangula, falcata, apice contracta, obtusa, 3nervia, c. 0.3 cm longa, basi 0.25 cm, apice bene 0.1 cm lata. *Labellum* e basi incurvo-subsacculata erectum, pedi gynostemii adpressum et inexplanatum aequilongum, apice recurvo sigmoideum, concavum, subtrilobulum, incrassationibus destitutum, 3nervium, superne undulatum, inexplanatum 0.45

cm longum, explanatum oblongum, basi leviter contractum, c. 0.525 cm longum, ad lobulos laterales 0.25 cm latum, lobulis lateralibus in c. $\frac{2}{3}$ supra basin brevissimis, obtusis, lobulo intermedio majore, recurvo, undulato, ambitu semielliptico, brevissime acuminato, c. 0.17 cm longo, 0.2 cm lato. *Gynostemium* breve, cum ovario angulum obtusum faciens, dorso convexum, marginibus vix prominentibus, absque anthera c. 0.13 cm longum, clinandrio excavato transverse ovali, pariete postico brevissime obtuse 3denticulato, denticulo intermedio paulo longiore triangulo. *Rostellum* breve, recurvum, rotundatum. *Stigma* transversum, semilunatum. *Pes gynostemii* cum ovario angulum acutum faciens, apice incurvulus, leviter sigmoideus, marginibus incrassatis subverruculosis in $\frac{3}{5}$ partibus supra basin confluentibus, supra basin angustatus sed crassus, apice abrupte attenuatus, c. 0.4 cm longus. *Ovarium* cylindricum, c. 0.3 cm longum, cum pedicello tenuiore basi incrassato 0.275 cm longo angulum obtusum faciens, brevissime hirtellum.

SUMATRA. West coast: Goenoeng Kerintji, 1800 m, epiphytical in forest (H. A. B. BÜNNEMEYER n. 9707, 26 April 1920; "flowers yellowish green, marked dark violet on the lateral segments towards the centre").

Related to *E. unifolia* J. J. S. from Java but differing in the colour of the flowers, narrower lateral sepals and petals, the shape of the mentum. The other one-leaved species of the section are still more distinct.

Description from herbarium and a portion of a spike preserved in alcohol.

***Microstylis* (sect. *Pseudoliparis*) *inexpectata* J. J. S. n. sp.**

Caulis erectus, c. 2.2–3.6 cm longus, paucifolius. *Folia* c. 4, inferiora parva, oblique ovata, acuta, basi oblique rotundata, nervis 3–5 dorso prominentibus, majora c. 2.15–3.9 cm longa 1.15–2.1 cm lata; petiolus latiusculus, canaliculatus, cum vagina tubulosa ad c. 1.3–2.2 cm longus. *Inflorescentia* laxa multiflora, pedunculo anguste alato-angulato, c. 3.1–6 cm longo, vaginula 0–1 donato, rachide anguste alato-angulata. *Bractae* reflexae, lanceolato-triangularae, acutae, c. 0.25–0.5 cm longae. *Flores* parvi. *Sepalum dorsale* deorsum spectans, ovatum, obtusum, 3nervium, bene 0.3 cm longum, 0.175 cm latum. *Sepala lateralalia* erecta, oblique ovata, obtusa vel anguste obtusa, subfalcata, 3nervia, c. 0.275 ad fere 0.3 cm longa, 0.15–0.18 cm lata. *Petala* linearia, obtusa, basi angustata, 1nervia, c. 0.27–0.3 cm longa, 0.05–0.04 cm lata. *Labellum* parvum, simplex, hippocrepidiforme, apice incurvulum, obtusum, brevissime bidentatum et utrinque erosulum, fovea in plica conspicua longitudinali introrso subtus canaliculata sita, oblonga, margine bene elevata apicem versus decrescente, infra apicem labelli terminante, pariete postico alta valde declivi in lobulum oblique erectum obtusum producto gynostemio adpressa, auriculis conspicuis, parallelis, oblique oblongo-triangulis, obtusis, totum c. 0.28 cm, usque ad basin fere 0.15 cm longum, bene 0.2 cm latum, auriculis fere 0.15 cm longis, basi 0.08 cm latis. *Gynostemium* satis longum, longitudinaliter 5costatum (maceratum), apice recurvulum, cornu conspicuo recurvo obtuso vel bilobulato basi lateraliter compresso papilloso

dorso in parte inferiore. *Anthera* cucullata, filamento lato firmiter inserta, quadrangula, apicem versus angustata, apice truncata et vix rotundato-producta, basi rotundato-bilobula, c. 0.05 cm lata. *Rostellum* porrectum, anthera brevius late subquadrangulum, plus minusve rotundatum, cum clinandrio convexum et costula longitudinali instructum, basi utrinque lobulo parvo triangulo deinde aucto donatum. *Stigma* in facie inferiore, concavum, cum rostello subovale. *Ovarium* pedicellatum 6angulatum, c. 0.3—0.37 cm longum.

SUMATRA. Without locality but probably in the vicinity of Sibolangit, 650 m, shady forest, rare (J. A. LÖRZING n.4224, 17 February 1916; "sepals and petals yellow-brown, a little greenish, lip light brown, the centre and column in general dark grey"). Garden Sibolangit, c. 500 m, on a fallen *Arenga*-stem, rare (J. A. LÖRZING n.5427, 23 November 1917; "flowers light yellow").

A most interesting find, the section *Pseudoliparis* of *Microstylis* being as yet only recorded from New Guinea and the Moluccas. Better material is very desirable.

Description from herbarium only.

***Microstylis* (sect. *Hololobos*) *cordiglottis* J. J. S. n. sp.**

Caulis approximati, erecti, c. 9—10 cm longi, inferne vaginas tubulosas gerentes, superne c. 3folii. *Folia* oblique ovata ad oblongo-ovata, longius acuminata, acuta, basi oblique rotundata, nervis c. 5 dorso prominentibus, c. 7—9.25 cm longa, 4.5—4 cm lata; petiolus brevis, latus, cum vagina tubulosa c. 2.5—3 cm longus. *Inflorescentia* densius multiflora pedunculo alato-angulato, c. 13 cm longo, nonnullis vaginulis bracteiformibus donato, rachide pluriangulata, c. 6—8 cm longa. *Bracteae* reflexae, subulatae, concavae, 1nerviae, c. 0.45 cm longae. *Flores* c. 0.43 cm lati, 0.57 cm longi, sepalis petalisque recurvis valde convexis intus subverruculosis carnosulis. *Sepalum dorsale* deorsum spectans, ovatum, truncatum, basi latum, 3nervium, c. 0.325 cm longum, 0.24 cm latum. *Sepala lateral*ia angulum acutum facientia, oblique orbiculari-ovata, obtusa, basi lata, 3nervia, margine exteriori c. 0.325 cm, medio 0.26 cm longo, 0.25 cm lata. *Petala* angulum obtusum facientia, oblique oblongo-ovalia, obtusa, 1nervia, c. 0.3 cm longa, 0.17 cm lata. *Labellum* cum ovario angulum obtusum faciens, simplex, integerrimum, late cordatum, fovea alte excavata, dorso convexa, longitudinali. oblonga, marginibus elevata, ultra medium labelli producta, antice vallo transverso multo latiore semilunato cum marginibus lateralibus foveae confluyente limitata, basi marginibus elevatis lamella transversa erecta retusa antice excavata gynostemio adpressa formante, apice planum, obtusum, carnosulum, c. 0.27 cm longum, 0.26 cm latum, auriculis brevissimis, rotundatis. *Gynostemium* ovario continuum, a dorso compressum, medio obtusangule incurvum, apice dilatatum, c. 0.15 cm longum, clinandrio concavo, auriculis divergentibus, oblique oblongis, oblique truncatis. *Anthera* plano-cucullata, reniformis, truncata, c. 0.075 cm lata. *Pollinia* 4, paulo inaequalia, a dorso compressa,

oblique clavato-pyriformia, c. 0.05 cm. longa. *Rostellum* transversum, membranaceum, truncatum, utrinque rotundatum et cum auriculis angulum acutum faciens. *Ovarium* pedicellatum breve, vix clavatum, 6costatum, costulis 6 minoribus interpositis, c. 0.23 cm longum, ovario 0.17 cm longo. *Capsula* obovoidea, basi acuta, c. 0.85—1 cm longa, in valvas 3 oblongo-obovatus basi acutas dorso costa longitudinali instructas et 3 lineares basi apiceque connatas dehiscens, pedicello c. 0.175—0.2 cm longo.

SUMATRA. Padangsche Bovenlanden: Laras Talang, Goenoeng Talang, 1800 m, terrestrial in forest (H. A. B. BÜNNEMEIJER n. 5224, 28 October 1918; "flowers violet, bracts violet-green, nerves of leaves and stem beneath light violet".)

A distinct species with fleshy flowers, broad petals and a quite entire broadly cordate lip with very short rounded auricles.

Description from herbarium and flowers preserved in alcohol.

Microstylis (sect. *Hololobus*) **bispirifera** J. J. S. n. sp.

Caules approximati, erecti, tenuiusculi, c. 6—7.5 cm longi, inferne nonnullis vaginis tubulosis superioribus laminam parvum gerentibus donato, superne 4folii. *Folia* patentia, oblique ovata, late triangulo-acuminata, acuta, basi plus minusve obliqua, undulata, nervis c. 5—7 subtus prominentibus pluribusque tenuibus, c. 3.2—6.3 cm longa, 2.2—3.4 cm lata; petiolus canaliculatus, cum vagina tubulosa 1.6—2.4 cm longus. *Inflorescentia* pluriflora, pedunculo angulato, c. 6—7 cm longo, vaginula bracteiformi donato, rachide costulata, c. 5.25 cm longa. *Bracteae* ad c. 0.55 cm longae. *Flores* c. 0.55 cm longi et lati. *Sepalum dorsale* deorsum spectans, ovato-ovale, obtusum, convexum, 3nervium, c. 0.34 cm longum, fere 0.2 cm latum. *Sepala lateralialia* erecta, divergentia, oblique ovata, obtusa, convexa cum margine concavo, dorso ad apicem minute verruculosa, 3nervia, bene c. 3 cm longa, bene 0.2 cm lata. *Petala* divaricata, oblongo-linearia, obtusa, basi concava, ceterum convexa, 1nervia, c. 0.3 cm longa, vix 0.1 cm lata. *Labellum* hippocrepidiforme, integerrimum, auriculis obtusangule incurvis gynostemium amplexans, fovea longitudinali, oblonga cum marginibus parallelis costiformi-incrassatis, alte excavata, dorso convexa, basi lamella transversa truncata gynostemio adpressa terminata, incrassatione transversa multo humiliore semiorbiculari intra marginem, explanatum quinquangulare-semiellipticum, angulis lateralibus rotundatum, apice obtusum, a basi c. 0.23 cm, totum 0.325 cm longum, 0.3 cm, ad auriculas 0.4 cm latum, auriculis divergentibus, falcatulorecurvulis, e basi oblique triangula sublineari-angustatis, obtusis, margine interiore 0.16 cm longis. *Gynostemium* cum ovario angulum obtusum faciens, breve, latum, rectum, valde a dorso compressum, e basi quadrata in clinandrium dilatatum, c. 0.16 cm longum et latum, clinandrio concavo semiorbiculari, auriculis divergentibus, incurvulis, obtusis, extus convexo-incrassatis, intus vix concavis. *Anthera* leviter cucullata, transverse ovalireniformis, apice medio brevissime producto truncata vix retusa, 0.1 cm

lata. *Pollinia* 4, in corpuscula 2 oblique obcordata unita, supra convexa, subtus plana, pyriformia, exteriora latiora curvulaque, c. 0.05 cm longa. *Rostellum* latum, membranaceum, sinu latiusculo rotundato obtuse bilobulum, auriculis fere aequilongum. *Stigma* transverse fissuriforme. *Ovarium* 6costatum, c. 0.2—0.27 cm longum. *Capsula* sessilis, c. 1 cm longa, in valvas 3 oblongas 3 lineares basi apiceque connatas dehiscens.

SUMATRA. West coast: Goenoeng Kerintji, 2200 m, forest on tree (?) (H. A. B. BÜNNEMEIJER n.10109, 6 May 1920; "flowers violet bordered light green").

It may be possible that the flower from which the above description was drawn was in a young state. In another flower of the same spike, apparently injured when being prepared, the lateral sepals were obliquely revolute and the lip concave with straight convex auricles.

It recalls one of *M. sumatrensis* RIDL. but the stem, leaves and inflorescence are much smaller, the sepals ovate and the tip of the lip not oblong.

Description from a dried specimen and a portion of the inflorescence preserved in alcohol.

Microstylis (sect. *Hololobos*) **bengkulensis** J. J. S. n sp.

Caulis e basi decumbente radicante erectus, c. 11.5 cm longus, inferne vaginatus, superne c. 4folius. *Folia* oblique ovalia, longius acuminata, acuta, basi lata oblique obtusa, nervis majoribus c. 5—6 curvatis subtus prominentibus pluribusque tenuibus, ad c. 7.25—8.75 cm longa, 4—4.3 cm lata, summa angustiora, infima parva; petiolus latiusculus, canaliculatus, cum vagina tubulosa c. 1.6—3 cm longus. *Inflorescentia* diu flores gignens, densius multiflora, pedunculo anguste alato-angulato, c. 9 cm longo, rachide anguste alato-angulata, c. 15.5 cm longa. *Bractae* reflexae, subulatae, ad c. 0.6 cm longae, superiores decrescentes. *Flores* c. 0.7 cm longi, sepalis lateralibus petalisque reflexis, adscendentibus, parallelis. *Sepalum dorsale* deorsum spectans, ultimo apice recurvum, valde convexum, anguste oblongum, apicem versus angustatum, ut videtur truncatum, 3nervium, bene 0.4 cm longum, 0.15 cm latum. *Sepala lateralialia* oblique ovali-oblonga, subfalcata, obtusa, valde convexa, 3nervia, c. 0.4 cm longa, 0.18 cm lata. *Petala* oblique linearia, falcata, obtusa, valde convexa, 1nervia, c. 0.37—0.38 cm longa, 0.07 cm lata. *Labellum* hippocrepidiforme, late sagittatum, integerrimum, fovea oblonga, alte excavata, dorso convexa, costulis 2 parallelis angustis limitata, in $\frac{2}{3}$ supra basin costa transversa semielliptica erecta angusta foveam utrinque conspicue superante subirregulariter marginata terminata, lamella transversa satis conspicua aequilateraliter trapeziformi retusa gynostemio adpressa ad basin, costa media in fovea convexo-incrassata, explanatum ambitu quinquangulare, apice inconspicue triangulo-contractum convexumque obtusiusculum, c. 0.3 cm, cum auriculis 0.5 cm longum, 0.38 cm latum, auriculis parallelis, oblique triangularis, obtusis vel subobtusis, margine interiore basi conspicue dilatatis, fere 0.2 cm longis, basi 0.16—0.175 cm latis. *Gynostemium* paulum

a dorso compressum, oblongum, apice dilatatum, c. 0.15 cm longum, auriculis divergentibus, oblongis, obtusis. *Anthera* plano-cucullata, reniformis, basi rotundato-bilobula, apice breviter obtuse bidentata, c. 0.075 cm lata. *Rostellum* latum, membranaceum, auriculis fere aequilongum, sinu lato obtuse bilobulum. *Ovarium* pedicellatum 6costatum, c. 0.4 cm longum.

SUMATRA. Bengkoeloe: Goenoeng Dempo, c. 2000 m (C. J. BROOKS n. 15905, August 1923; „stalk and flowers purple”).

An ally of *M. tjiwideiensis* J. J. S. from Java but with the habit of the flowers different, narrower sepals and petals, falcate petals, a different nectary and bidentate anther.

Description from a single dried specimen.

***Microstylis* (sect. *Hololobos*) *marginata* J. J. S. n. sp.**

Rhizoma breve, radicans. *Caules* approximati ad c. 1.3 cm distantes, erecti, elongati, c. 8—20 cm longi, inferne vaginis tubulosis donati, superne 4—5folii. *Folia* patentia, oblique ovata ad oblongo-ovata, acuminata, acuta, basi valde obliqua, latere latiore rotundata, latere angustiore acute acuminata, nervis 5—7 curvatis subtus prominentibus, sicco membranacea, infima parva, c. 4.5—12.5 cm lata; petiolus latus, canaliculatus, cum vagina tubulosa c. 2.5—5.5 cm longus. *Inflorescentia* dense multiflora, pedunculo c. 8.5—10 cm longo, vaginula bracteiformi donato, rachide costata, c. 18—20 cm longa. *Bracteae* reflexae, lineari-subulatae, 1nerviae, ad c. 0.6 cm longae, 0.15 cm latae. *Flores* parvi, patentissimi, c. 0.48 cm lati, 0.525 cm longi, sepalis petalisque patentissimis. *Sepalum dorsale* deorsum spectans, marginibus valde recurvis dorso contiguis lanceolato triangulum, explanatum ovato-ovale, obtusum, 3nervium, c. 0.2 cm latum. *Sepala lateral* erecta, divergentia, angulum acutum subrectum facientia, recta, marginibus valde recurvis dorso contiguis, oblique oblongo-triangu-
la, explanata oblique orbiculari-ovalia, obtusissima, 3nervia, c. 0.25 cm longa, bene 0.2 cm lata. *Petala* divaricata, falcato-adscendentia, marginibus valde recurvis dorso contiguis linearia, explanata oblique oblonga, obtusa, 1nervia, fere 0.3 cm longa, bene 0.1 cm lata. *Labellum* hippocrepidiforme, ambitu quinquangulare, integerrimum, apice obsolete acuminatum, anguste obtusiusculum, subrectangulum, fovea conspicua, longitudinali, ovali, alte excavata, dorso convexa, lamella transversa satis alta aequilateraliter trapeziformi retusa ad basin, incrassatione transversa conspicua semilunata intramarginali irregulariter incisa medio erecta utrinque decumbente intus prope marginem, auriculis remotis, divergentibus, oblique triangulis, obtusis, margine interiore c. 0.175 cm longis, basi 0.13 cm latis, totum c. 0.4 cm, a basi fere 0.25 cm longum, 0.37 cm latum. *Gynostemium* a dorso compressum, medio leviter obtusangule incurvum, oblongo-quadrangulum, apice dilatatum, dorso ad apicem leviter longitudinaliter costulatum, fere 0.15 cm longum, auriculis porrectis, divergentibus, oblongis, obtusis. *Anthera* plano-cucullata, transverse ovali-reniformis, apice brevissime producto truncata, fere 0.1 cm lata. *Pollinia* 4, a dorso compressa, in corpuscula 2 late oblique obovata unita, convexa, basi acuta,

fere 0.05 cm longa. *Rostellum* membranaceum, auriculos subaequans, obtuse bilobulum. *Ovarium* pedicellatum breve, curvulum, valde 6costatum, c. 0.3 cm longum.

SUMATRA. West coast: Goenoeng Merapi, 1500 m, forest (H.A.B. BÜNNEMEIJER n.4933, 27 September 1918; "flowers violet, upper portion of anther green, bracts light violet bordered green, sheaths and nerves of leaves dirty violet"). Same locality, 1800 m (H.A.B. BÜNNEMEIJER n.4988, 30 September 1918; "flowers and bracts violet, peduncle faintly violet"). Goenoeng Kerintji, 1500-1520 m, forest, common (H.A.B. BÜNNEMEIJER n.8674, 11 March 1920; n.9031, 20 March 1920; n.10515, May 1920; "flowers dark or light violet").

Much resembling the preceding but with broader sepals and petals, an irregularly incised intramarginal ridge on the lip and a truncate anther.

Description from herbarium and flowers preserved in alcohol.

Microstylis (sect. *Crepidium*) **puberula** J. J. S. n. sp.

Caules approximati, erecti, elongati, c. 15—19 cm longi, inferne vaginis tubulosis donati, superne 5—6folii. *Folia* inferiora oblique ovata, superiora oblique oblango-elliptica, acuminata, acuta, basi praesertim in foliis superioribus valde obliqua, nervis c. 5 majoribus dorso prominentibus numerosisque tenuibus, sicco membranacea, c. 7—9.5—10 cm longa, 4.4—4.5—3.3 cm lata; petiolus latus, canaliculatus, cum vagina c. 4—2.5 cm longus. *Inflorescentia* laxe multiflora, pedunculo c. 28 cm longo, nonnullis vaginulis bracteiformibus donato, rachide multiangulata, 14.5 cm superante. *Bractee* reflexae, lineari-subulatae, 1nerviae, c. 0.525 cm longae. *Flores* mediocres, c. 0.8 cm longi et lati, sepalis petalisque patentissimis, intus sparse minute papilloso-puberulis. *Sepalum dorsale* deorsum spectans, rectum, marginibus revolutis tubulosum, lineare, explanatum oblongum, obtusum, 3nervium, bene 0.5 cm longum, 0.2 cm latum. *Sepala lateralialia* erecta, divergentia, cum sepalo dorsali angulum obtusum facientia, marginibus valde recurvis valde convexa, deinde oblique recurva, macula concava infra apicem, explanata late oblique subovata, obtusa, 3nervia, c. 0.43 cm longa, 0.27 cm lata. *Petala* patentia, angulum obtusum facientia, supra basin falcato-divaricata, marginibus valde recurvis convexo-linearibus, explanata subspathulata, obtusa, retusa, 1nervia, c. 0.5 cm longa, 0.13 cm lata. *Labellum* late hippocrepidiforme, basi concavum fovea alte excavata, dorso convexa, quadrangula, marginibus elevata, antice in medio labelli incrassatione transversa conspicua carnosae postice recta et circa quinquecrenata antice declivi limitata, lamella transversa aequilateraliter trapeziformi truncata gynostemio adpressa ad basin, totum ambitu transverse quinquangulare, apice leviter late rotundatum, apice medio dentibus 4 irregularibus aequilongis oblique triangulis omnibus saepe denticulo minore instructis et utrinque nonnullis crenis minoribus extrorsum decrescentibus donatum, basi lata truncatum, medio tantum affixum, auriculis valde remotis divergentibus, subrecurvulis, oblique triangulis, obtusis, margine interiore 0.225 cm longis, 0.17 cm latis, 0.2 cm remotis, totum bene 0.5 cm, a basi 0.3

cm longum, 0.525 cm latum. *Gynostemium* leviter inclinatam, medio obtusangule incurvulum, a dorso compressum, oblongo-quadrangulum, apice leviter dilatatum, bene 0.2 cm longum, clinandrio semiorbiculari, auriculis porrectis, vix divergentibus, extus subconcavis, intus convexis, late oblongis, apice plusminusve rotundato-truncatis, margine postico apice in dentem acutum porrectum terminantibus. *Anthera* plano-cucullata, auriculis brevior, transverse ovali-subreniformis apice truncato 4crenulata, basi retusa, fere 0.1 cm lata. *Pollinia* (ex alabastro) 4, non a dorso compressa, inaequalia, oblique pyriformi-clavata, basi acuta. *Rostellum* transversum, membranaceum, auriculis bene brevius, breviter bilobulum. *Ovarium* 6costatum, c. 0.2 cm longum, cum pedicello 0.25 cm longo angulum obtusum faciens.

SUMATRA. West coast: Goenoeng Kerintji, 1600 m, forest (H.A.B. BÜNNEMEIJER n.8441, 5 March 1920; "flowers dark violet").

This species differs from all other known to me by the slightly puberulous sepals and petals.

Description from a dried specimen and a portion of the spike preserved in alcohol.

Microstylis (Sect. *Crepidium*) **lunifera** J. J. S. n. sp.

Habitu M. Blumei BOERL. et J. J. S. *Pseudobulbi* dense vel subdense aggregati, breves, c. 2—3 cm longi, 4—7folii, basi vaginati. *Folia* majuscula, erecto-patentia, oblique elliptica ad elliptico-lanceolata, acuminata, acuta, basi haud valde oblique acuta, nervis majoribus c. 5—7 dorso prominentibus numerosisque tenuioribus, sicco tenuiter membranacea, c. 7—15.5 cm longa, 2.1—4.6 cm lata; petiolus latus, canaliculatus, cum vagina c. 4—4.5 cm longus. *Inflorescentia* folia bene superans, laxe ad subdense multiflora, pedunculo c. 11—18.5 cm longo, nonnullis vaginulis bracteiformibus linearibus donato, multiangulata. c. 17—19 cm longa. *Bractee* reflexae, linearisubulatae, leviter concavae, basi convexae, 1nerviae, ad c. 0.5 cm longae, superiores decrescentes. *Flores* parvi, patentissimi, c. 0.53 cm lati, 0.475 cm longi. *Sepalum dorsale* semireflexum, cum ovario angulum acutum faciens, recurvulum, marginibus valde recurvis, explanatum, oblongo-subovale, basi latum, 3nervium, fere 0.3 cm longum, 0.15 cm latum. *Sepala lateralalia* oblique erecta, divergentia, angulum acutum facientia, marginibus valde recurvis, infra apicem haud concavo-excavata, oblique ovalia, rotundata, 3nervia, c. 0.24 cm longa, 0.175 cm lata. *Petala* leviter recurvula, patentissima, fere recta, marginibus valde recurvis linearia, explanata subspathulata, falcata, apicem versus sat sensim dilatata, obtusa, 1nervia, c. 0.28 cm longa, 0.1 cm lata. *Labellum* hippocrepidiforme, fovea longitudinali, late oblonga, alte excavata, dorso convexa, costulis 2 parallelis limitata, antice in c. $\frac{2}{3}$ partibus supra basin vallo conspicuo alto semilunato bene latiore terminata, lamella transversa retusa gynostemio adpressa ad basin, antice subtrilobum, lobo intermedio producto, vix incurvulo, ambitu subsemiorbiculari, sinu acuto breviter obtuse bilobulo, dentius 2 aequilongis lobo in-

termedio conspicue brevioribus breviter oblique triangulis et angulo inconspicuo rotundato utrinque, auriculis remotis, paulo divergentibus, oblique triangulis, obtusis, margine interiore 0.15 cm longis, fere 0.1 cm latis, totum c. 0.33 cm a basi 0.175 cm. longum, 0.35 cm latum, lobo medio fere 0.05 cm longo, fere 0.1 cm lato. *Gynostemium* ovario subcontinuum, leviter a dorso compressum, $\frac{3}{5}$ partibus superioribus leviter obtusangule incurvulum, subtus concavum, oblongum, apice haud dilatatum, c. 0.14 cm longum, clinandrio concavo, semilunato, auriculis porrectis, parallelis verticalibus, oblongo-quadrangulis, oblique truncatis, obtusis, margine postico denticulo brevissimo obtuso praeditis. *Anthera* plano cucullata, transverse quinquangulata, basi breviter bilobula, apice vix producto truncata, auriculis multo brevior, bene 0.05 cm lata. *Pollinia* 4, in corpuscula 2 oblique obovata unita, supra convexa, exteriora latiora, obtusa, basi acuta, vix 0.05 cm longa. *Rostellum* transversum, membranaceum, auriculis multo brevius, rotundato-excisum. *Stigma* clinandrio simile. *Ovarium* pedicellatum fere 0.5 cm longum.

SUMATRA. West coast: Goeneng Kerintji, epiphytcal in forest (H. A. B. BÜNNEMEIJER n. 8440, 5 March 1920, 1600 m; n. 8452, 5 March 1920, 1600 m; n. 6816, 8 March 1920, 1200 m; n. 8716, 12 March 1920, 1600 m; n. 8753, 13 March 1920, 1500 m; n. 8890, 16 March 1920, 1700 m; n. 9022, 20 March 1920, 1500 m; n. 9066, 22 March 1920, 1500 m; "flowers light green, peduncle dirty violet, leaves purple beneath").

In habit this resembles *M. Blumei* BOERL. et J. J. S. but the peduncle is much longer and the flowers much smaller and of a different shape.

Description from herbarium and materials preserved in alcohol.

***Microstylis* (sect. *Crepidium*) *sororia* J. J. S. n.sp.**

Habitu *M. Blumei* BOERL. et J. J. S. *Rhizoma* breve, repens, carnosum, radicans. *Pseudobulbi* approximati, breves, carnosi, c. 1—5.5 cm longi, c. 6folii. *Folia* erecto-patentia, oblique elliptico-oblonga ad lanceolata, sensim acuminata, acuta, basi haud valde oblique in petiolum contracta, nervis majoribus 5—7 dorso prominentibus numerosisque tenuioribus, membranacea, ad c. 11—16.5 cm longa, 3—5 cm lata, inferiora parva; petiolus latissimus, canaliculatus, cum vagina c. 2.2—5.5 cm longus. *Inflorescentia* valida, folia superans, laxa multiflora, pedunculo c. 1—12 cm longo, rachide multicostata, c. 12.5—29 cm longa. *Bractee* reflexae, e basi paulo dilatata lineari-subulatae, acutae, concavae, ad c. 0.95 cm longae, basi 0.25 cm latae. *Flores* patentissimi, magni, fere 1.2 cm longi. *Sepalum dorsale* deorsum spectans, apice brevissimo recurvo, marginibus valde recurvis subtubuloso-linearis, explanatum oblongum, marginibus parallelis, obtusum, 3nervium, c. 0.7 cm longum, 0.25 cm latum. *Sepala lateralialia* reversa, convexa, infra apicem concavo-excavata, explanata oblique oblongo-ovalia, falcata, obtusa, 3nervia, c. 0.55 cm longa, fere 0.3 cm lata. *Petala* reflexa, marginibus valde recurvis fere tubulosa, leviter falcata, explanata oblique linearia, apicem versus paululo dilatata, obtusa, retusa, 1nervia, c. 0.74 cm longa, basi 0.08 cm, superne 0.125 cm lata. *Labellum*

conspicuum, hippocrepidiforme, apice incurvum, fovea longitudinali, oblonga, valde excavata, dorso convexa, antice vallo valido transverso semilunato apice valde elevato obtusangulo acutangule marginato in medio labelli terminata, lamella transversa gynostemio adpressa ad basin, apice ambitu leviter rotundatum, obsolete 3lobum, lobo intermedio brevi, ambitu late triangulo vel aequilateraliter trapeziformi, inaequaliter 2—4fidum cum dentibus anguste oblique triangulis acutisque, dentibus 3—4 extrorsum decrescentibus oblique subulatis ad triangulis et interdum angulum obtusum utrinque, dentibus interioribus lobum intermedium paulum superantibus vel aequantibus et leviter incurvulis, dentibus exterioribus extrorsum curvis, auriculis conspicuis, convexis, leviter divergentibus vel subparallelis, oblique triangulis, anguste subobtusis, margine interiore fere 0.5 cm longis, 0.325 cm latis, totum c. 0.95 cm, a basi fere 0.5 cm longum, 0.8 cm latum, lobo intermedio bene 0.1 cm longo, 0.175 cm lato. *Gynostemium* inclinatum, cum ovario angulum obtusum faciens, a dorso compressum, infra medium leviter obtusangule incurvum, oblongum, c. 0.275 cm longum, 0.175 cm latum, clinandrio concavo semiorbiculari, auriculis porrectis, leviter divergentibus, oblongo-quadrangulis, oblique truncatis, intus convexis, extus concavis. *Anthera* plano-cucullata, transverse obverse aequilateraliter trapeziformi-ovalis, basi apiceque subtruncata, fere 0.125 cm lata. *Pollinia* 4, valde a dorso compressa, supra convexa, subtus plana, in corpuscula 2 falcato-obovata unita, obtusa, basi acuta, interiora paulo angustiora, c. 0.06 cm longa. *Rostellum* membranaceum, altius rotundato-quadrangulo-excisum, obtuse bilobulum, auriculis brevius. *Stigma* basi rotundatum. *Ovarium* c. 0.275 cm longum cum pedicello 0.6—0.8 cm longo curvatum, 6costatum. *Capsula* valde immatura erecta, rachidi parallela, clavata, 1.5—1.7 cm longa, pedicello valido, patente, cum capsula angulum faciente c. 0.5 cm longo.

SUMATRA. West coast: Goenoeng Talakmau, north-west slope, 1100 m, on tree in river-bed (H. A. B. BÜNNEMEIJER n.647, 9 May 1917; "flowers white"). Kerintji Peak, south slope, 1500 m, epiphytical in forest, common (H. A. B. BÜNNEMEIJER n.8381, 4 March 1920; "flowers light green, leaves violet beneath, dark shining green above"). Same locality, 1600 m (H. A. B. BÜNNEMEIJER n.8450, 5 March 1920; "flowers light green, peduncle dirty violet, leaves violet beneath").

A near ally of *M. Blumei* BOERL. et J. J. S. and *M. acutangula* HOOK. f. It differs from *M. Blumei* in the longer peduncled laxer inflorescence, larger flowers, narrower petals, from the latter, of which I was enabled, by the kindness of the director of the Royal Gardens, Kew, to compare the authentic specimen, in the peduncled spike, broader petals, a different lip and the auricles of the column obliquely truncate.

Description from herbarium and flowers preserved in alcohol.

Microstylis (sect. *Crepidium*) **irregularis** J. J. S. n. sp.

Caulis tenuiusculus, post florescentiam e parte superiore ramulum emittens, innovationibus c. 7.5 cm vel plus longis, 4—5foliis (vel plus?).

Folia oblique oblongo-elliptica vel leviter ovata, longius acuminata, acuta, basi oblique acuta, nervis 5 majoribus subtus prominentibus, c. 7.5—10 cm longa, 2.75—3.65 cm lata; petiolus latiusculus, canaliculatus, cum vagina c. 2.4—3.9 cm longus. *Inflorescentia* elongata, laxe multiflora, diu flores gignens, pedunculo c. 30 cm longo, nonnullis vaginulis bracteiformibus donato, rachide c. 16 cm longa. *Bractee* reflexae, anguste triangulae, acutae, ad c. 0.4 cm longae. *Flores* mediocres, c. 0.8 cm longi et lati. *Sepalum dorsale* deorsum spectans, marginibus revolutis tubulosum, explanatum oblongum, marginibus parallelis, obtusum, 3nervium, c. 0.45 cm longum, 0.175 cm latum. *Sepala lateral*a patentia, divergentia, marginibus valde revolutis, oblique ovalia, obsolete acuminata, obtusa, 3nervia, fere 0.4 cm longa, 0.225 cm lata. *Petala* patentissima, marginibus revolutis valde convexa, oblique spathulata, oblique obtusa, retusa, c. 0.46 cm longa, ungue lineari, c. $\frac{2}{5}$ — $\frac{1}{2}$ longitudinis, 0.05 cm lato, parte superiore 0.1 cm lata. *Labellum* hippocrepidiforme, fovea alte excavata, dorso convexa, ambitu subquinquangulari, medium labelli attingente, antice incrassatione transversa apice obtusangula limitata, lamella transversa gynostemio adpressa ad basin, apice ambitu leviter late rotundatum, irregulariter dentatum, dentibus c. 3—5 utrinque, interdum minoribus interpositis, oblique triangulis, obtusis, exterioribus brevissimis, auriculis conspicuis, subparallelis, valde convexis, oblique triangulis, anguste obtusis, totum c. 0.625—0.675 cm, a basi bene 0.3 cm longum, 0.5—0.53 cm latum, auriculis c. 0.3—0.33 cm longis, 0.2—0.23 cm latis. *Gynostemium* c. 0.16 cm longum, clinandrio cum parte inferiore angulum obtusum faciente, auriculis latis, apicem versus dilatatis, truncatis. *Anthera* cucullata, orbiculari-ovata, obtusissima, basi bilobula, bene 0.05 cm lata. *Pollinia* 4, supra convexa, in corpuscula oblique obovata falcata unita, fere 0.05 cm longa. *Rostellum* ut videtur auriculas aequans, bilobulum. *Ovarium* pedicellatum 6costatum, c. 0.35 cm longum.

SUMATRA. West coast: Goenoeng Kerintji, north west slope, 1800 m, forest (H. A. B. BÜNNEMEIJER n.10489a, May 1920; "flowers violet").

In the shape of the flowers this much resembles *M. sororia* J. J. S., but the stem and leaves are very different, the peduncle longer and the flowers smaller.

Description from a dried specimen.

Microstylis (sect. *Crepidium*) **ovalisepala** J. J. S. n. sp.

Caulis decumbens, radicans, adscendens, carnosus, foliatus, parte foliata c. 8 cm longa, c. 10folia. *Folia* oblique elliptica ad oblonga, satis abrupte acuminata, acuta, basi valde obliqua in petiolum acuminata, superiora majora, nervis 5 majoribus dorso prominentibus numerosisque tenuibus, ad c. 11 cm longa, 4.1 cm lata; petiolus latus, canaliculatus, cum vagina ad c. 4 cm longus. *Inflorescentia* foliis multo longior, laxissime multiflora, pedunculo valido, c. 29 cm longo, nonnullis vaginulis donato, rachide anguste alato-costata, c. 19 cm longa. *Bractee* breves, reflexae, e basi dilatata subulato-acuminatae,

convexae, apice incurvulo concavae, 1nerviae, c. 0.4 cm longae, 0.16 cm latae. *Flores* mediocres, fere 0.8 cm longi. *Sepalum dorsale* oblique porrectum, cum ovario angulum obtusum faciens, subrectum, marginibus revolutis tubulosum, explanatum ovale, rotundatum, 3nervium, c. 0.43 cm longum, 0.26 cm latum. *Sepala lateral*a semireflexa, inter se et cum ovario angulos acutos, cum sepalo dorsali angulos obtusos facientia, subrecta, marginibus oblique tubuloso-revoluta, explanata oblique orbiculari-ovalia, rotundata, 3nervia, fere 0.4 cm longa, 0.3 cm lata. *Petala* semireflexa, marginibus tubuloso-revolutis linearia, subfalcata, explanata oblique oblonga, obtusa, vix retusa, basi angustata, 1nervia, c. 0.45 cm longa, fere 0.15 cm lata. *Labellum* hippocrepidi-forme, superne incurvulum, dentibus subrecurvulis fovea longitudinali, oblonga, alte excavata, dorso convexa, marginibus incrassata, antice ultra medium incrassatione transversa elevata obtusangula plicis longitudinalibus subtricostata leviter trilobulata terminata, apice late rotundatum, c. 8dentatum, dentibus brevibus oblique triangulis acutis extrorsum leviter decrescentibus (dentibus 2 medianis lobum intermedium facientibus), auriculis conspicuis, parallelis, oblique triangulis, acutiusculis, convexis, margine interiore c. 0.3 cm longis, totum c. 0.6 cm, a basi 0.3 cm longum, 0.5 cm latum. *Gynostemium* ovario fere continuum, paulum supra medium obtusangule incurvulum, supra visum oblongo-quadrangulum, apice haud vel vix dilatatum, c. 0.16 cm longum, clinandrio concavo, subsemiorbiculari-quadrangulo, auriculis satis brevibus, parallelis, verticalibus, oblique quadrangulis, oblique rotundato-truncatis. *Anthera* plano-cucullata, transverse oblongo-reniformis, apice latissimo truncata, basi retusa, c. 0.08 cm lata. *Pollinia* 4, a dorso compressa, in corpuscula 2 falcato-subobovata unita, exteriora falcato-subsemielliptica, interiora angustiora, falcato-subclavata, apice obtusa, basi acuta, c. 0.05 cm longa. *Rostellum* auriculas aequans, sinu rotundato-bilobulum. *Ovarium* c. 0.25 cm longum, cum pedicello 0.5 cm longo 6costatum.

SUMATRA. Division L Kota, Goenoeng Koeriman, 1000 m, forest (H. A. B. BÜNNEMEIJER n.3315, 24 June 1918; "flowers green, auricles of lip (?) purple bordered green, peduncle greyish green faintly tinged purple").

Another species of the large *Crepidium* section, distinguished by the very lax inflorescence, short bracts, broad sepals and broad anther.

Description from a single dried specimen and flowers preserved in alcohol.

Microstylis (sect. *Crepidium*) **magnifovea** J. J. S. n. sp.

Planta valida. *Caulis* inferne decumbens, radicans, adscendens, fere omnino foliatus, post florescentiam ramulum emittens, innovationibus c. 7—11.5 cm longis, 5—9foliis. *Folia* erecto-patentia ad patentia, oblique elliptica ad oblongo-elliptica, acute acuminata, basi oblique acuta, nervis c. 7 majoribus subtus prominentibus, sicco membranacea, c. 8—16 cm longa, 2.6—5.7 cm lata, inferiore saepe minora; petiolus latus, canaliculatus, cum vagina tubulosa c. 2.7—6 cm longus. *Inflorescentia* subdense multiflora, diu flores gignens,

pedunculo c. 20 cm longo, nonnullis vaginulis donato, rachide multicostata, 20 cm superante. *Bractee* reflexae, lineari-subulatae, basi convexae, ceterum leviter concavae, 1nerviae, c. 0.7 cm longae, 0.15 cm latae. *Flores* parvuli, c. 0.6 cm longi, 0.725 cm lati, sepalis petalisque patentissimis. *Sepalum dorsale* deorsum spectans, recurvulum, marginibus valde recurvis dorso fere contiguus, oblongum, obtusum, 3nervium, c. 0.4 cm longum, 0.16 cm latum. *Sepala lateral*a patentissima, vix recurvula, marginibus valde recurvis fere contiguus, oblique ovalia, obtusa, 3nervia, c. 0.34 cm longa, 0.2 cm lata. *Petala* divaricata, curvula, marginibus valde recurvis fere contiguus, oblique linearia, falcata, obtusa, 1nervia, c. 0.375 cm longa, fere 0.1 cm lata. *Labellum* hippocrepidiforme subtrilobum, fovea longitudinali, oblonga, valde excavata, dorso valde convexa, margine incrassato, praesertim antice valde elevato quinquelobulato hippocrepidiformi, basin non attingente costulis 2 parallelis longitudinalibus ad basin intra foveae marginem, lamella transversa gynostemio adnata ad basin, lobo intermedio ambitu semiorbiculari, obtusa bilobulato, interdum (abnormaliter) irregulariter crenato, dentibus c. 2 brevioribus brevibus extrorsum decrescentibus, oblique triangulis acutis obtusisve et angulo obtuso vel rotundato utrinque, auriculis parallelis, oblique triangulis, subacutis vel obtusis, margine interiore c. 0.15—0.2 cm longis, 0.1 cm latis, totum c. 0.37—0.43 cm, a basi 0.225—0.23 cm longum, 0.34 cm latum, lobo intermedio 0.05—0.07 cm longum, 0.1—0.125 cm latum. *Gynostemium* crassum, haud compressum, subrectum, bipartitum, c. 0.17 cm longum, auriculis porrectis, parallelis, verticalibus, latis, margine antico recto margine foveae adpressis, margine postico ante antheram dente obtuso praeditis, obtusis. *Anthera* plano-cucullata, transverse ovali-reniformis, apice medio truncata, c. 0.06 cm lata. *Pollinia* 4, paulo a dorso compressa, in corpuscula 2 late oblique obovata unita, obtusa, basi acuta, exteriora quam interiora latiora, c. 0.03 cm longa. *Rostellum* excisum. *Ovarium* 0.125 cm longum cum pedicello 0.5 cm longo sexalato-costatum.

SUMATRA. West coast: Goenoeng Merapi, 1400 m, forest, terrestrial (H. A. B. BÜNNEMEIJER n.4551, 14 September 1918; "stem dirty violet-grey, bracts light green, flowers violet-grey, yellow in the centre".)

Resembling the preceding species but with a much denser inflorescence, longer bracts, smaller and more delicate flowers, narrower sepals and petals, a distinct midlobe.

Description from a dried specimen and flowers preserved in alcohol.

Microstylis (sect. *Crepidium*) **kerintjiensis** J. J. S. n. sp.

Caulis elongatus, basi decumbente radicante, adscendens, c. 19—20 cm longus, 10—12folius. *Folia* patentia, oblique semiovato-oblonga, triangulo-acuminata, acuta vel acutiuscula, plerumque minute apiculata, verisimiliter leviter undulata, basi valde obliqua, latere longiore plusminusve rotundata, latere brevior acuta, nervis c. 4—5 subtus prominentibus, sicco membranacea, c. 4.5—7 cm longa, 1.85—3 cm lata; petiolus canaliculatus, cum vagina c. 2.5—3 cm longus. *Inflorescentia* laxius multiflora, pedunculo c. 5—6 cm

longo, plerumque vaginula bracteiformi donato, rachide multicostata, c. 12.5—15 cm longa. *Bracteae* reflexae, lineari-subulatae, 1nerviae, ad c. 0.65 cm longae, superiores decrescentes. *Flores* parvuli, c. 0.6 cm longi, 0.5 cm lati, sepalis revolutis, valde convexis. *Sepalum dorsale* explanatum subelliptico-oblongum, acutato-obtusum, basi latum, 3nervium, c. 0.425 cm longum, 0.25 cm latum. *Sepala lateral* late oblique ovalia, obtusissima, apice plerumque haud concavo-excavata, 3nervia, fere 0.4 cm longa, fere 0.3 cm lata. *Petala* recurva, marginibus valde recurvis linearia, valde convexa, explanata anguste oblique oblonga, basi angustata subspathulata, obtusa, 1nervia, c. 0.4 cm longa, 0.14 cm lata. *Labellum* hippocrepidiforme, 3lobum, fovea longitudinali, anguste oblonga, alte excavata, dorso convexa, marginibus haud elevata, lamella transversa triangula obtusa gynostemio adpressa ad basin, lobo medio conspicuo, porrecto, ambitu ovato-quadrangulo, sinu acuto obtuse triangulobilobulo, basi lato, marginibus recurvulo, c. 0.175 cm longo, 0.17 cm lato, dentibus 3 longis lobo intermedio dimidio brevioribus subulatis subrectis vel vix curvulis extrorsum decrescentibus ad c. 0.1 cm longis et angulo plus minusve distincto obtuso vel leviter rotundato utrinque, auriculis leviter incurvulis, oblique triangulis, obtusis, convexis, c. 0.18 cm longis, 0.15—0.17 cm latis, totum c. 0.53 cm, a basi 0.35 cm longum, 0.47 cm latum. *Gynostemium* breve, inclinatum, supra basin obtusangule incurvum, a dorso compressum, ambitu quadrangulum, dorso costa longitudinali instructum, c. 0.15 cm longum, clinandrio concavo, semiorbiculari, auriculis porrectis, parallelis, verticalibus, oblique oblongis, obtusis. *Anthera* cucullata, ambitu transverse quinquangulareniformis, obtusissima, basi breviter bilobula, 0.06 cm lata. *Pollinia* 4, a dorso compressa, in corpuscula 2 oblique obovata unita, obtusa, basi acuta, praesertim exteriora falcata, fere 0.05 cm longa. *Rostellum* tenuiter membranaceum, auriculis brevius. *Ovarium* c. 0.2 cm longum, cum pedicello 0.425 cm longo 6costatum.

SUMATRA. West coast: Goenoeng Kerintji, forest (H. A. B. BÜNNEMEIJER n. 8213, 16 February 1920, 1200 m, "rare, flowers yellowish green, afterwards changing to red, peduncle tinged violet"; n. 8451, 5 March 1920, 1600 m, "flowers yellow"; n. 8614, 8 March 1920, 1100 m, "flowers light yellow, leaves shining green above"; n. 8634, 9 March 1920, 1400 m, "flowers yellow"; n. 8673, without label; n. 8787, 14 March 1920, 1550 m, "flowers yellowish green, bracts green, peduncle violet"; n. 8979, 19 March 1920, 1600 m, "flowers yellowish green").

Near *M. oculata* RCHB. F. but with the leaves laxer and green, the flowers somewhat larger and yellow or yellow-green, afterwards changing to red, somewhat spathulate petals, relatively shorter and blunter auricles and a longer midlobe of the lip.

I suppose that the plant enumerated by H. N. RIDLEY in Journ. Fed. Mal. St. Museums VIII (1917), 88 under the name of *M. oculata* RCHB. F. belongs here.

Description from herbarium and materials preserved in alcohol.

Oberonia (sect. *Platyacron*) **subanajamensis** J.J.S. n. sp.

Caules approximati, elongati, compressi, multifolii, c. 6.5—15 cm longi, cum foliis c. 1.3—2.3 cm lati, internodiis c. 0.75—0.9 cm longis. *Folia* c. 5—12 utrinque, satis diversa, mediana vel inferiora maxima, erecto-patentia, inarticulata, valde lateraliter compressa, triangula ad lanceolato-triangula, falcato-incurva, acuta vel plerumque breviter acute acuminata, valde carinata, basi supra fissa, carnosa, tota c. 0.9—4.1 cm longa, ad c. 0.8—1 cm lata, apice non fisso c. 0.25—2.3 cm longo, 0.25—0.625 cm lato. *Inflorescentia* sessilis, cylindrica, densius multiflora, apice laxa, c. 11—16.5 cm longa, 0.55—0.6 cm diam., rachide costata, patentissime puberula. *Bractee* adpressae, oblongo-triangularae, acute acuminatae, concavae grossius ciliatae, ad c. 0.25 cm longae, superiores decrescentes. *Flores* in pseudoverticillos c. 8meros dispositi, parvi, patentissimi, c. 0.15—0.175 cm lati, 0.17—0.2 cm longi, sepalis patentissimis, valde recurvis, dorso puberulis. *Sepalum dorsale* late ovato-triangulum, obtusiusculum vel acutiusculum, c. 0.075 ad fere 0.1 cm longum, 0.07—0.75 cm latum. *Sepala lateralalia* oblique ovato-triangula, obtusa vel satis acuta, c. 0.075 ad fere 0.1 cm longa, 0.07—0.075 cm lata. *Petala* patentissima, angulum obtusum facientia, non recurva, oblonga, apicem versus paululum angustata, obtusa, leviter concava, c. 0.07—0.075 cm longa, 0.03 cm lata. *Labellum* satis conspicuum, medio fere constrictum, panduratum, auriculis (lobis lateralibus) reversis oblique oblongis obtusis concavis gynostemium amplexans, 3nervium, explanatum totum c. 0.15 cm, a basi bene 0.1 cm longum, ad auriculum 0.125 cm, constrictione 0.07 cm latum, lobo intermedio transverse subovali, apice sinu acutangulo rotundato-bilobulo, irregulariter serrato, c. 0.07—0.75 cm longo, 0.125 cm lato. *Gynostemium* brevissimum, latius quam longum, truncatum, c. 0.04 cm longum, clinandrio transverse ovali, concavo. *Anthera* cucullata, transverse ovalis, in rostrum breve triangulum obtusum producta, vix 0.025 cm lata. *Rostellum* bidentatum. *Stigma* subsemiorbiculare, margine inferiore elevato. *Ovarium* patentissime puberulum cum pedicello parce puberulo c. 0.15—0.2 cm longum.

SUMATRA. Bengkoeloe: Soeban Ajam (Exp. E. JACOBSON, AJOEB nrs. 354 and 355, 13 July 1916 "flowers dark yellow").

Very near *O. lampongensis* J. J. S. but with longer stems, narrower falcate leaves, longer inflorescences, differently coloured flowers with the sepals strongly recurved.

More material is wanted to determine whether the characters are sufficient to keep upright the species.

Description from materials preserved in alcohol.

Oberonia (sect. *Otoglossum*) **semifimbriata** J.J.S. n. sp.

Caules approximati, elongati sed breviusculi, c. 2.5—4.75 cm longi, 6—16folii. *Folia* inarticulata, patentia, lateraliter compressa, oblique linearia, acuta obtusave, apiculata, inferne supra fissa et in sicco membranaceo-marginata, vagina lateraliter compresso-tubulosa, tota c. 2.5—8 cm longa,

0.32–0.7 cm lata. *Inflorescentia* elongata, foliis multo longior, nutans, breviter pedunculata, dense vel subdense multiflora, cylindrica, glabra, sicco c. 0.4–0.45 cm diam., pedunculo c. 0.6–1.5 cm longo, pluribus vaginulis filiformibus in bracteis vergentibus donato, rachide c. 4.5–9 cm longa, acute multiangulata. *Bracteae* inferiores subulatae, ad c. 0.25 cm longae, superiores decrescentes, adpressae, leviter concavae, oblongo-triangularae, acute acuminatae, subirregulariter marginatae, c. 0.15 cm longae, 0.05 cm latae. *Flores* parvi, patentissimi, in pseudovercillos c. 8meros dispositi, c. 0.175 cm longi. *Sepalum dorsale* oblongum, dimidio superiore laciniis longis filiformibus minute tortuosis minute ramulosis fimbriatum, inferne erosum, c. 0.13 cm longum, fere 0.05 cm latum. *Sepala lateralalia* reflexa, incurva, concava, late oblique ovato-triangulara, obtusa, c. 0.075 cm longa, 0.08 cm lata. *Petala* divergentia, oblique subovato-oblonga, apicem versus angustata, omnino more sepali dorsalis fimbriata, c. 0.125 cm longa, 0.06 cm lata. *Labellum* porrectum, concavum, subtus convexum, 3lobum, explanatum totum bene 0.05 cm longum, ad lobos laterales 0.07 cm latum; lobi laterales incurvuli, explanati divaricati, oblique quadranguli, basin versus paululum angustati, truncati, angulo antico obtusi; lobus intermedius bene major, incurvulus, subtus convexus, transverse ovalis vel suborbicularis, basi latus, c. 0.03 cm longus, 0.04–0.05 cm latus. *Gynostemium* brevissimum, a dorso compressum, apice conspicue dilatatum, cum anthera c. 0.025 cm longum et paulo latius, clinandrio concavo, transverse ovali. *Anthera* erecta, transverse rotundato-quadrangulara. *Pollinia* 4, leviter a latere compressa, inaequalia, oblique oblonga, exteriora majora, extus convexa, interiora breviora et tenuiora. *Ovarium* pedicellatum, glabrum, c. 0.1 cm longum. *Capsula* parva, patentissima, subobovoideo-globosa, 6angulata, 6costata, lateribus concavis, c. 0.18 cm longa, 0.175 cm diam., pedicello 0.075–0.1 cm longo.

SUMATRA. East coast: Sibolangit, c. 400 m, epiphytical in forest on a dry slope, rare (J. A. LÖRZING n. 5314, 5 October 1917; "leaves green, brown, flesh-coloured or purple, flowers red-brown"). A curious species which apparently belongs to the affinity of *O. pumilio* RCHB. f. The tufted stems are rather short, with inarticulate leaves and glabrous inflorescences. The dorsal sepal and petals are very long-fimbriate, the lateral sepals and lip quite entire.

Description from herbarium.

Liparis (sect. *Euliparis*) **heliophila** J. J. S. n. sp.

Pseudobulbi approximati, breviter oblongi ad irregulariter subglobosi, c. 0.75–1.1 cm longi, 2folii. *Folia* subsessilia, inaequimagna, patentissima, terrae adpressa, ovata, basi rotundata, valde longitudinaliter plicata, nervis 5–7 subtus carinatis, ad c. 5.5 cm longa, 3.5 cm lata. *Inflorescentia* erecta, laxe pluriflora, pedunculo angulato, c. 4.75 cm longo, nonnullis vaginulis donato, rachide angulata, 3 cm superante. *Bracteae* oblongo-triangularae, acutae, concavae, 1nerviae, c. 0.4 cm longae. *Flores* quaquaversi, parvuli.

Sepalum dorsale oblongum, apice angustatum, obtusum, 5nervium, c. 0.6 cm longum, bene 0.2 cm latum. *Sepala lateral*ia sub labello porrecta, oblique oblonga, acutiuscula, oblique convexa, 5nervia, c. 0.575 cm longa, 0.28 cm lata. *Petala* marginibus valde revolutis lineari-tubulosa, explanata, oblique lineari-spathulata, obtusa, 1nervia, c. 0.6 cm longa, basi 0.05 cm, superne 0.12 cm lata. *Labellum* basi gynostemio adnatum, breviter unguiculatum, 5nervium, nervis 3 medianis approximatis, exterioribus valde ramosis, explanatum c. 0.65 cm longum, ungue leviter canaliculato cum callo transverso decumbente antice retuso, basi brevissime reverse obtuse biauriculato, explanato ambitu obverse aequilateraliter trapeziformi, c. 0.15 cm longo, 0.3 cm lato, lamina obtusangule recurva, convexa cum canalicula inconspicua longitudinali, explanata transverse 6angulata, apice latissimo truncata, basi excepta minute erosulo-crenulata, c. 0.5 cm longa, 0.725 cm lata. *Gynostemium* arcuatum, basi valde dilatatum rotundatumque, ovario multo latius, dorso convexum, subtus marginibus elevatis canaliculatum, cum fascia mediana convexa, apice in utraque stigmatis parte ala obtuse triangula instructum, apice truncatum vix retusum, absque anthera bene 0.3 cm longum, basi 0.18 cm latum, clinandrio transverse quadrangulo excavato cum costula longitudinali. *Rostellum* bilobulum cum apiculo in sinu. *Stigma* quadrangulum. *Ovarium* pedicellatum valde 6costatum, c. 0.575 cm longum.

SUMATRA. Bataklanden: North west frontier of Habinsaran, hills west of the Batoehoeda, on an earthen rampart, scattered (J. A. LÖRZING n.8038, 18 November 1920). North west edge of Lake Toba on the Piso-piso, 1350 m, sunny grassy slope, locally not rare (J. A. LÖRZING n.7220, 30 January 1920, "inflorescence pale yellowish green, flowers somewhat more yellow"). West coast: Agam, Baso, laterite on limestone hills, growing in the full sun (W. GROENEVELDT, liv. pl. cult. in Hort. E. JACOBSON, Fort de Kock, sub n.1602, "leaves, peduncle, bracts, pedicel and ovary somewhat yellowish green, sepals and petals transparently yellowish green, lip olive green, column light green").

Allied to *L. pratensis* RIDL. from Berastagi, but the pseudobulbs with only two much smaller ovate leaves, differently coloured flowers, a crenulate lip, the column not thickened above but provided with two triangular alae.

Description from a plant preserved in alcohol.

***Liparis* (sect. *Euliparis*) *conspicua* J. J. S. n. sp.**

Rhizoma breve, radicibus crassiusculis. *Caules* approximati, breves, nonnullis vaginis ad basin, 3—4folii. *Folia* magna, erecto-patentia, late oblique elliptica, inferiora obtusa, superiora triangulo-acuminata, acuta, nervis 5—7 majoribus curvatis numerosisque tenuibus, sicco membranacea, c. 10—22 cm longa, 6—11.5 cm lata; petiolus brevissimus, canaliculatis, cum vagina c. 6—8 cm longus. *Inflorescentia* valida, laxe multiflora, pedunculo alato, c. 23—24 cm longo, evaginulato, rachide interrupte c. 5alata, c. 12—15 cm longa. *Bractee* minutae, patentissimae vel plus minusve recurvae, ambitu late triangulae, e basi

rotundato-dilatata acuminatae, acutae, apiculatae, 1nerviae, c. 0.3 cm longae et latae. *Flores* patentes, conspicui, c. 2.1 cm longi. *Sepalum dorsale* reversum, cum gynostemio angulum rectum vel acutum faciens, marginibus recurvis valde convexum, lanceolatum, obtusum, 3nervium, c. 1.2 cm longum, 0.325 cm latum. *Sepala lateral*ia sub labello porrecta, marginibus oblique tubuloso-revolutis, oblique oblonga, falcata, obtusa, 3nervia, bene 1 cm longa, 0.36 cm lata. *Petala* recurva, sepalo dorsali subparallela, marginibus valde recurvis, linearia, obtusa, 1nervia, bene 1.1 cm longa, vix 0.1 cm lata. *Labellum* parallelum gynostemio erectum, recurvulum, convexum, praesertim inferne late longitudinaliter canaliculatum, basi medio gynostemio brevissime adnatum, callo brevi longitudinali supra visum oblongo-quadrangulo a latere viso rotundato-triangulo excavato ad basin, callo longitudinali convexo utrinque supra basin, explanatum ambitu flabellato-subobcordatum, basi breviter contractum, supra basin utrinque leviter rotundato-dilatatum, paululum infra medium conspicue rotundato-dilatatum, apice breviter lateque retusum, antice irregulariter crenulatum, 3nervium, nervis exterioribus valde ramosis, c. 1.25 cm longum, bene 1.1 cm, basi 0.3 cm latum. *Gynostemium* reclinatum, cum ovario angulum subrectum faciens, apice incurvum, dorso applanatum et utrinque angulatum, subtus concavum et marginibus medio utrinque in alam porrectam obtuse triangulam subrepandulam margine inferiore callo labelli adpressam dilatatum, basi paulo dilatatum, c. 0.575 cm longum, clinandrio concavo cum costula longitudinali. *Rostellum* truncatum. *Stigma* subquadratum. *Ovarium* apice sursum curvum c. 0.6 cm longum cum pedicello basi torto c. 1.1 cm longo valde 6costatum.

SUMATRA. West coast: Goenoeng Kerintji, forest, 1600–1700 m (H. A. B. BÜNNEMEIJER n.8444, 5 March 1920, “inflorescence light green, near the gynaecium violet”; n.8678, 11 March 1920, “flowers light green, stem suffused with violet”; n.8832, 15 March 1920, “flowers light green with a violet blotch in the centre, peduncle violet”).

This species recalls one of *L. atrosanguinea* RIDL. but the flowers are differently coloured, the lip totally different and the ovary and pedicel much shorter.

Description from herbarium and flowers preserved in alcohol.

Liparis (sect. *Rachidibulbon*) **crassibasis** J. J. S. n.sp.

Innovationes 1foliae, nonnullis vaginis ad basin. *Folium* ovatum, sensim leviter acuminatum, subacutum, basi rotundatum, nervis c. 7 majoribus numerosisque tenuibus, sicco membranaceum, c. 5.3–8 cm longum, 3.7–5 cm latum; petiolus cum vagina c. 1–1.7 cm longum. *Inflorescentia* folium superans, laxe pluriflora, pedunculo basi in pseudobulbum incrassato, c. 6.5–8.5 cm longo, rachide alato-angulata, 2–4 cm superante. *Bractee* triangulae, acutae, concavae, c. 0.16 cm longae. *Flores* c. 1.3 cm longi. *Sepalum dorsale* erectum, cum ovario angulum rectum faciens, marginibus revolutis tubulosum, lanceolato-triangulum, apicem versus sensim angustatum, obtusum, 3nervium,

c. 0.7 cm longum, bene 0.2 cm latum. *Sepala* lateraliter deflexa, marginibus valde revolutis, apice recurvula, oblique oblonga, apicem versus sensim angustata, subfalcata, obtusa, 3nervia, costa media dorso prominente, c. 0.7 cm longa, 0.24 cm lata. *Petala* decurva, marginibus valde recurvis, linearia, falcata, obtusiuscula, 1nervia, fere 0.7 cm longa, 0.08 cm lata. *Labellum* basi late canaliculata basi gynostemii adpressum, deinde recurvum, convexum cum marginibus recurvis, ante flexum fascia longitudinali vix incrassatula donatum, explanatum ambitu cuneato-quadrangulum, basi breviter contractum truncatum et medio tantum basi gynostemii brevissime adnatum, apice late breviterque rotundato-biloba, cum lobulo parvo semioblongo obtuso lobis aequilongo in sinu, superne minute erosulum, nervis 3 valde approximatis, nervis exterioribus basi furcatis, ramulis exterioribus ramosis, c. 0.68 cm longum, basi 0.24 cm, superne fere 0.6 cm latum. *Gynostemium* curvulum, leviter undatum, dorso praesertim versus apicem applanatum, apice truncatum, medio tenue, ala rotundato-triangulari in $\frac{2}{5}$ partibus superioribus in utraque stigmatis parte, basi subtus valde incrassatum, incrassatione subtus visa aequilateraliter trapeziformi carnosae basi truncata ovario bene crassiore, absque anthera c. 0.34 cm longum, 0.18 cm latum ad basin, clinandrio excavato, transverse quadrangulo. *Anthera* cucullata, transverse quadrangula, apice leviter retusa, fere 0.1 cm lata. *Ovarium* triangulari-angulatum cum costa in lateribus, c. 0.2 cm longum; pedicellus 6costatus, c. 0.8 cm longus.

SUMATRA. Padangsche Bovenlanden: Laras Talang, Goenoeng Talang, 1600 m, forest (H. A. B. BÜNNEMEIJER n.5221, 28 October 1918; "flowers green").

Allied to *Liparis javanica* J.J.S. from which it differs in the shape of the leaf, lip and column.

Description from herbarium and flowers preserved in alcohol.

***Liparis* (sect. *Distichon*) *kerintjiensis* J.J.S. n. sp.**

Rhizoma elongatum, repens, ramosum, brevinode, praesertim prope pseudobulbos radicans, initio vaginis pseudobulbos versus accrescentibus longius lateraliter compresso-acuminatis acutis ad c. 2.2—3 cm longis tectum. *Pseudobulbi* c. 1.8—2.8 cm distantes, ovati, verisimiliter compressi, sicco c. 1—1.2 cm longi, 1folii. *Folium* articulatum, erectum, lineare, breviter acute apiculato-acuminatum, basi conduplicatum, costa media dorso carinata, rigidulum, c. 12—17.5 cm longum, 0.5—0.7 cm latum; vagina conduplicata, c. 2—3 cm longa. *Inflorescentia* erecta, dense multiflora, diu flores gignens, pedunculo ensiformi, c. 10—18 cm longo, rachide quadrangula, ad c. 3.75 cm longa, cum bracteis 0.85—0.875 cm lata, internodiis facie florem versus spectante excavatis, c. 0.125—0.13 cm longis. *Bractee* alternatim bifariae, approximatae, contiguae, patentes, cymbiformes, conduplicatae, dorso leviter curvatae, valde carinatae, carina ultra apicem producta, acutae, a latere visae lanceolatae, dorso ad basin anguste triangulo-excavatae, c. 0.6—0.65 cm longae. *Flores* c. 0.85 cm longi, sepalis reflexis. *Sepalum* dorsale oblongo-ovatum, obtusum,

convexum, costa media dorso prominula, apice incrassatula et breviter conico-apiculata, 3nervium, c. 0.5 cm longum, 0.24 cm latum. *Sepala* lateralialia oblique ovata, obtusa, apiculata, dorso carinata, 3nervia, 0.5 cm longa, 0.33 cm lata. *Petala* erecta, supra gynostemium incurvula, oblique spathulata, obtusa, leviter convexa, nervo dorso vix prominulo, c. 0.475 cm longa, c. 0.125 cm, basi 0.08 cm lata. *Labellum* basi gynostemio adpressum et medio breviter adnatum, supra basin valde recurvum, inexplanatum ambitu transverse aequilateraliter trapeziforme, marginibus lateralibus apiceque recurvis quadrilobulatum, plica valida introrsa transversa convexa utrinque supra basin, plica minore introrsa convexa utrinque ad apicem, apice valde recurvum, callo conspicuo carnosio transverse ovali apice brevissime rotundato-trilobulato antice medio foraminulato ad basin, callis 2 bene minoribus collateralibus triangulis canalicula rectangula sejunctis plus minusve connatis antepositis, superne praesertim in plicis anticis papillosum, inexplanatum c. 0.33 cm longum, basi 0.43 cm, apice 0.325 cm latum, explanatum aequilateraliter trapeziforme, apice medio leviter producto quinquelobulatum, bene 0.4 cm longum, basi 0.475 cm, apice 0.35 cm latum. *Gynostemium* inclinatum, rectum, a dorso compressum, latissimum, supra visum quinquangulare, angulis obtusis, basi truncata ovario multo latius, dorso costa longitudinali satis conspicua obtusa instructum, ala erecta triangula obtusa vel obtusiuscula in utraque stigmatis parte, costulis 2 obtusangulis longitudinalibus ab alarum margine postico versus gynostemii angulos basilares decurrentibus praeditum, c. 0.3 cm longum et latum, clinandrio concavo, transverso truncato. *Anthera* cucullata, apice rotundato-producta, ambitu semiovalis, c. 0.08 cm lata. *Stigma* transversum. *Ovarium* fere 0.2 cm longum, cum pedicello 0.67 cm longo 6costatum.

SUMATRA. West coast: Goenoeng Kerintji, epiphytical in forest (H. A. B. BÜNNEMEIJER n.8600, 8 March 1920, 1200 m, "flowers green"; n.8911, 16 March 1920, 1700 m, "flowers light green"; n.8955, 17 March 1920).

Differing from the similar *L. gibbosa* FINET in the rachis with the bracts being broader, the longer pedicellate green flowers, broader sepals, a relatively broader less constricted lip with a much broader lobule at the tip, a broader column and shorter anther.

Description from herbarium and flowers preserved in alcohol.

***Liparis* (sect. *Platystylis*) *auriculifera* J. J. S. n. sp.**

Planta caespitosa, humilis. *Pseudobulbi* approximati, elongati, obverse clavati, c. 1.4—1.8 cm longi, apice 2folii. *Folia* erecta, divergentia, articulata, spathulata, oblongo-obovata ad elliptica, obtusa, apiculata vel brevissime acuminata, basi sensim subpetiolato-contracta conduplicataque, costa media dorso prominente, membranacea ad sat firmiter membranacea, c. 2.4—4.4 cm longa, 0.75—1.4 cm lata; vagina canaliculata, basin versus dilatata et pseudobulbo adnata, c. 0.35—0.8 cm longa. *Inflorescentia* folia bene superans, laxe multiflora, pedunculo alato, c. 2.2—3.5 cm longo, nonnullis vaginulis superne decrescentibus et in bracteas vergentibus donato, rachide alato-

angulata, c. 3.5—7.5 cm longa. *Bracteae* persistentes, ovato-triangularae, apicem versus angustatae, acutae, basi lata rachidem semiamplectentes, c. 0.2 cm longae et fere aequilatae. *Flores* quaquaversi, c. 0.63 cm lati, 0.7 cm longi. *Sepalum dorsale* erectum, cum gynostemio angulum acutum faciens, ovatum, obtusum, basi lata gynostemium semiamplectens, marginibus recurvis convexum, nervo 1 dorso prominente, bene 0.3 cm, totum 0.4 cm longum, 0.28 cm latum. *Sepala lateralialia* deflexa, marginibus apiceque recurvis, convexa, basi concava, oblique ovalia, obtusa, nervo 1 dorso prominente, c. 0.45 cm longa, 0.25 cm lata. *Petala* divaricata, supra basin reflexam incurva, marginibus recurvis valde convexa, linearia, explanata oblique spathulata, ex ungue brevi oblongo-elliptica, obtusa, 1nervia, c. 0.4 cm longa, c. 0.14 cm, supra basin 0.04 cm lata. *Labellum* basi gynostemio adpressum, ante medium valde recurvum, inexplanatum gynostemio brevius, basi (ungue) utrinque in auriculam conspicuam reversam divergentem oblique orbicularem carnosam gynostemio subtus adpressam dilatatum, auriculis in flexu more *Agrostophylli* incrassatione transversa antice minute foraminulata conjunctis, margine antico antice in formam lamellarum longitudinalium parallelarum satis altarum abrupte terminantium in basin epichylii decurrentibus, epichylio hypochylio bene latiore, basi utrinque plica minima transversa deorsum spectante et antice plica multo majore introrsa convexa praedito, recurvulo, convexo cum canalicula lata longitudinali utrinque incrassatione leviter convexa limitata, late cordato-triangulo, brevissime obtuse acutato ad breviter acuminato, 3nervium, explanatum totum c. 0.325 cm longum, hypochylio 0.24 cm lato, epichylio c. 0.25 cm longo, fere 0.3 cm lato. *Gynostemium* leviter inclinatum, rectum, a dorso compressum, basi valde dilatata ovario multo latiore in auriculas 2 reversas divergentes oblique triangulos obtusas carnosas productum, dorso leviter convexum, antice contractum, ala patentissima leviter reversa oblique triangula acutiuscula carnosae in utraque stigmatis parte, dimidio superiore in facie antica lamellis 2 erectis parallelis late oblique triangulis obtusis instructum, totum c. 0.28 cm longum, basi 0.225 cm, ad alas apicales 0.16 cm latum, clinandrio concavo, transverse elliptico. *Anthera* cucullata, transverse ovalis, fere 0.1 cm lata. *Rostellum* leviter rotundatum. *Stigma* alte excavatum, semiellipticum, apice truncatum. *Ovarium* pedicellatum 6costatum, c. 0.47 cm longum.

SUMATRA. West coast: Goenoeng Kerintji, epiphytocal in forest (H. A. B. BÜNNEMEIJER n. 8377, 4 March 1920, 1500 m, "flowers light brown"; n. 8834, 15 March 1920, 1700 m, "flowers light orange, calyx green"; n. 9074, 22 March 1920, 1500 m, "flowers light yellowish green, lip orange").

A distinct species with a pair of rounded auricles at the base and the usual perforate basal callus replaced by a transverse bar recalling the transverse lamella of the lip of *Agrostophyllum*.

Description from herbarium and flowers preserved in alcohol.

Liparis (sect. *Platystylis*) **Aptenodytes** J.J.S. n. sp.

Planta pusilla. *Pseudobulbi* approximati, c. 1.4 cm longi, c. 4folii. *Folia* articulata, oblongo-elliptica, brevissime acute acuminata vel apiculata, basi plus minusve spathulato-contracta, costa media dorso prominente, sicco membranacea, c. 1.6–3.5 cm longa, 0.6–1.25 cm lata; vagina basi pseudobulbo adnata, canaliculata, apicem versus angustata, petioliformis, apice basi laminae aequilata, c. 0.6–1.1 cm longa. *Inflorescentia* folia multoties superans, laxe multiflora, diu flores gignens, pedunculo brevi, c. 3.5–4.5 cm longo, nonnullis vaginulis foliaceis superne decrescentibus et in bracteas vergentibus donato, rachide elongata, angulata, c. 12–27 cm longa. *Bracteae* persistentes, patentissimae, triangulae, acute acuminatae, basi lata medio tantum affixae, margine papillosae, c. 0.225 cm longae, 0.17 cm latae. *Flores* parvuli, quaquaversi, bene 0.7 cm longi. *Sepalum dorsale* erectum, cum ovario angulum obtusum faciens, leviter incurvulum, ultimo apice recurvum, marginibus lateralibus valde recurvis dorso contiguis, antice longitudinaliter sulcatum, ovatum, obtusiusculum, nervo 1 dorso prominente, bene 0.3 cm longum, 0.24 cm latum. *Sepala lateralalia* sub labello deorsum spectantia, cum ovario angulum rectum, inter se angulum acutum facientia, recta, marginibus valde recurvis, antice longitudinaliter canaliculata, oblique oblonga, obtusa, inaequilatera, nervo 1 dorso carinato, c. 0.4 cm longa, bene 0.2 cm lata. *Petala* reflexa, valde incurva, anguste linearia, acuta, 3nervia, c. 0.35 cm longa, 0.03 cm lata. *Labellum* supra unguem brevissimum gynostemio adpressum auriculis 2 reversis parallelis brevibus rotundatis excavationem sub basi labelli formantibus instructum decurvum, callo conspicuo transverso leviter a dorso compresso triangulo obsolete rotundato-trilobulo antice minute foraminulato et callis 2 brevioribus divergentibus intus convexis extus concavis antepositis intus in flexu, lamina deorsum spectante, convexa, parte mediana concava, ambitu quadrangula, apicem versus paululum dilatata, marginibus lateralibus leviter rotundata, basi utrinque plica conspicua reversa et plica introrsa convexa instructa, apice in lobos 2 conspicuos rotundato-triangulos obtusos divergentes partita cum lobulo parvo obtuso in sinu, margine papillosa, 3nervium, nervis exterioribus basi furcatis, inexplanatum c. 0.36 cm longum, bene 0.3 cm latum. *Gynostemium* ovario continuum, rectum, latum, a dorso compressum, dorso longitudinaliter obtusangulum, subtus concavum, marginibus basin versus divergentibus superne approximatis et in utraque stigmatis parte in lamellam erectam latiusculam satis humilem rotundato-triangulam carnosulam dilatatis, dimidio superiore utrinque ala conspicua brachiiformi patente reversa subfalcatula triangula obtusiuscula a dorso compressa carnosula instructum, basi utrinque rotundata et in auriculam brevem reversam producta ovario latius, c. 0.2 cm longum, ad alas 0.24 cm, basi 0.14 cm latum, clinandrio concavo, transverse ovali, pariete postico rotundato-exciso. *Anthera* cucullata, aequilalateraliter trapeziformis, apice leviter producta rotundata et membranacea, c. 0.06 cm lata. *Rostellum* transversum, leviter rotundatum, membranaceum. *Stigma* altius excavatum, obverse aequilalateraliter trapeziforme. *Ovarium*

pedicellatum alato-sexcostatum, c. 0.35 cm longum. *Capsula* trigona cum costa in lateribus, oblonga, c. 0.5 cm longa, pedicello 0.25—0.4 cm longo.

SUMATRA. West coast: Goenoeng Kerintji, epiphytical in forest (H. A. B. BÜNNEMEIJER n.8535, 7 March 1920, 1500 m, "flowers light brown"; n.8540, 7 March 1920, 1500 m, "flowers red-brown"; n.8681, 11 March 1920, 1600 m, "flowers light brown").

Another well characterized species of the section *Platystylis* which by the shape of the labellum stands quite isolated.

Description from herbarium and material preserved in alcohol.

Agrostophyllum lampongense J. J. S. n. sp. (Bull. Jard. Bot. Buit. 3e sér., I(1909), 100, nomen).

Caules approximati, breves, validi, valde compressi, apicem versus dilatati, virides, c. 8—17 cm longi, 1.8—2.4 cm lati, inferne vaginis antice rumpentibus et irregulariter nigro-marginatis superne conduplicatis acutis mox exarescentibus imbricantibus superioribus accrescentibus ad c. 8 cm longis tecti, superne c. 5folii. *Folia* patentia, oblongo-loriformia, paulo inaequaliter rotundato-biloba, basi contracta conduplicataque, margine leviter recurvula, costa media supra sulcata subtus prominente, tenuiuscule coriacea, nitide viridia, superiora accrescentia (ultimum parvum exceptum), c. 4.2—19 cm longa, 1.7—35 cm lata; vaginae latae, conduplicatae, apice basi laminae latiores et utrinque in lobulum obtusum auctae, c. 6.5—1 cm longae. *Inflorescentia* terminalis, capitata, nutans, semiglobosa, densissime multiflora, c. 2.1—2.8 cm diam. *Inflorescentiae partiales* brevissimae, 2—3flores, pedunculo abbreviato. *Bracteae* satis conspicuae, infundibuliformi-tubulosae, obtusae, membranaceae, ad c. 0.45 cm longae. *Flores* bene expansi c. 0.7 cm lati, pallide flavescentes, sepalis basi breviter connatis. *Sepalum dorsale* ovatum, obtusum, basi sacculato-concavum, c. 0.37 cm longum, 0.23 latum. *Sepala lateralialia* oblique ovata, breviter conico-apiculata, basi sacculato-concava, carinata, c. 0.37 cm longa, 0.25 lata. *Petala* oblique lanceolata, acutiuscula obtusave, inferne paulo dilatata convexaque, c. 0.36 cm longa, 0.1 cm lata. *Labellum* gynostemio adpressum, cum gynostemio oblique cyathiforme, medio subtus conspicue constrictum, gynostemium superans, album, totum c. 0.37 cm longum, dimidio inferiore (hypochylia) saccato, obtuso pariete postico subrecto, antice convexo, intus longitudinaliter prominenter 5costato, nectarifluo, c. 0.175 cm longo, lamella transversa costiformi satis valida a lamina separato, lamina porrecta, marginibus erectis incurvis rotundatis inferne gynostemio adpressis valde concava, explanata transversa, subsemiorbiculari-oblonga, obtusissima, obtuse apiculata, fera 0.2 cm longa, 0.4 cm lata. *Gynostemium* cum ovario angulum obtusum faciens, curvulum, dimidio inferiore subtus obtusangule incrassatum et infra stigma concavum, in utraque stigmatis parte dilatatum, flavescenti-album, apice dilute aureum, c. 0.25 cm longum, clinandrio concavo, margine repandulo, pariete postico apice porrecto truncato-obtuso. *Anthera* cucullata, apice trilobulata, flava, c. 0.1 cm lata. *Pollinia* 8,

clavato-pyriformia, flavescentia. *Rostellum* excisum, bidentatum. *Stigma* transversum, angustum. *Ovarium* obtuse trigonum, 6sulcatum, albidum, furfuraceum, c. 0.5 cm longum.

SUMATRA. Djambi: Kerintji, Pintjoeran Gading (W. GROENEVELDT liv. pl. cult. in Hort. E. JACOBSON, Fort de Kock, sub. n. 1417). — Bengkulu: Rimbo Pengading (Exp. E. JACOBSON 1916, AJOEB, liv. pl. cult. in Hort. Bog. sub. n. 867). — Lampoengsche districten: (W. J. D. VAN ANDEL liv. pl. cult. in Hort. Bog.).

In the shape of the flowers this much resembles *A. cyathiforme* J.J.S. but the short, broad, flattened, few-leaved stems distinguish it at once.

Description from living specimens.

Ceratostylis (sect. *Euceratostylis*) **brevicostata** J.J.S. n. sp.

Caules aggregati, fasciculati, tenues, teretes, binodes, c. 2.3–4 cm longi, vix 0.1 cm diam., omnino vaginis sursum accrescentibus obtecti, vagina suprema infra medium inserta. *Folium* erectum, lineari-lanceolatum, obtusum, apiculatum, basi petiolato-contractum canaliculatumque, supra canaliculatum cum lateribus convexis, subtus convexum, crasse carnosum, totum (e spiritu vini) c. 3.1–5.8 cm longum, 0.4–0.475 cm latum, petiolo 0.40–0.5 cm longo; vagina tubulosa, c. 0.2–0.35 cm longa. *Inflorescentiae* c. 4 fasciculatae, pedunculis filiformibus, lanato-pubescentibus, c. 1–1.3 cm longis. *Bractee* minimae. *Flos* c. 0.6 cm longis, sepalis apice recurvis, dorso sparse adpresse puberulis. *Sepalum dorsale* oblongum, apicem versus angustatum, obtusum, minute obtuse apiculatum, 3nervium, c. 0.42 cm longum, 0.175 cm latum. *Sepala lateral*ia lacinia brevi suborbiculari valde inflato-concava ad pedem gynostemii decurrentia, mentum reversum ovario adpressum scrotiforme a dorso compressum retusum subtus visum ambitu suborbiculare dorso c. 0.14 cm longum fere 0.225 cm latum formantia, oblique oblongo-triangulari, apicem versus angustata, obtusa, breviter obtuse apiculata, 3nervia, c. 0.5 cm, tota 0.67 cm longa, 0.2 cm lata. *Petala* apice recurva, subrhombico-lanceolata, apicem versus angustata, acutiuscula, inferne leviter concava, 1nervia, fere 0.4 cm longa, 0.12 cm lata. *Labellum* porrectum, gynostemium bene superans, leviter undatum, ambitu lanceolatum, $\frac{1}{4}$ parte inferiore marginibus incurvis leviter unguiculatum, $\frac{1}{3}$ – $\frac{2}{5}$ partibus superioribus carnosico-conico-incrassatum, obtusum, concavum, subtus convexum cum sulco longitudinali, 3nervium, dimidio inferiore fere basi excepta minute ciliolatum, costulis 2 longitudinalibus parallelis tenuibus ciliolatis in fere $\frac{1}{3}$ parte inferiore, explanatum ex ungue cuneato-quadrangulo ovato-oblongum, obtusum, c. 0.525 cm longum, bene 0.2 cm latum. *Gynostemium* alte bipartitum, supra visum ambitu oblongo-quadrangulum, subtus infra stigma sulco longitudinali instructum, c. 0.2 cm longum, brachiis parallelis, oblique oblongis, obtusis, extus convexis, intus concavis. *Anthera* cucullata, rotundato-quadrangula, apice truncata, basi lobulis 2 parvis rotundatis, utrinque lobulo multo majore patentissimo ovato-triangulo instructa,

ambitu transverse elliptica, 0.1 cm lata. *Pes gynostemii* reversus, ovario adpressus, valde incurvus, gynostemio bene angustior, apicem versus angustatus. *Ovarium* lanato-pubescent, c. 0.3 cm longum; pedicellus parcius puberulus, c. 0.15 cm longus.

SUMATRA. West coast: Goenoeng Malintang, 1700 m, epiphytial in forest (H.A.B. BÜNNEMEIJER n. 4215, 1 August 1918; "flowers light dirty violet, in the centre yellow").

An ally of *C. trinodis* J. J. S. but with shorter stems, narrower leaves, broader sepals and petals, a broader lip with 2 short ridges, a longer and strongly incurved column foot.

Description from herbarium and materials preserved in alcohol.

Appendicula (sect. Eu-Appendicula) **verruculifera** J. J. S. n. sp.

Caules approximati, elongati, c. 50 cm longi, internodiis c. 1.5 cm longis. *Folia* (1 adest) patentia, oblonga, brevissime obtuse bilobula cum mucrone interposito, sicco c. 3 cm longa, 0.8 cm lata; vaginae tubulosae, apice antice excisae, internodia subaequantes. *Inflorescentiae* e nodis caulium, erecto-patentes, subsessiles, simplices, dense pluriflorae, quaquaversae, pedunculo nonnullis vaginulis brevibus tubulosis donato, cum rachide c. 1.5—1.8 cm longo. *Bracteae* patentissimae ad recurvulae, rachidem semiamplectentes, acuminatae, concavae, 3—5nerviae, ad c. 0.55 cm longae, 0.35 cm latae. *Flores* c. 11, mediocres, c. 0.6 cm longi, sepalis petalisque conniventibus, parallelis, basi brevissime connatis, dimidio superiore sepalorum dorso verruculosis. *Sepalum dorsale* horizontale, 3-subquinguangulato-ovatum, truncato-obtusum, concavum, 3nervium, c. 0.475 cm longum, 0.325 cm latum. *Sepala lateral*ia basi rotundato-dilatata, valde concava, ad pedem gynostemii decurrentia, mentum breve marginibus anticis breviter connatis saccatum basin labelli amplectens latum cum ovario angulum acutum faciens a latere visum oblique quadrangulum oblique truncatum dorso 0.2 cm longum formantia, oblique triangula, obtusa, minute apiculata, concava, 3nervia, c. 0.48 cm longa, margine antico 0.5 cm, basi 0.46 cm metientia. *Petala* porrecta, parallela, verticalia, oblique plus minusve sexangulato-obovata, truncata, saepe leviter retusa, concava, 1nervia, c. 0.44 cm longa, 0.27 cm, basi 0.17 cm lata. *Labellum* marginibus inferne pedi gynostemii saccato-adnatum, sacco antice ventricosus canalicula lata longitudinali didymo, parte antica valde recurva, inexplanata oblonga, canaliculato-concava, marginibus erectis inferne angulum obtusum facientibus gynostemio adpressa, eum bene superante, apice marginibus incurvis obtusangule cucullato-concava, apice breviter obtuse bilobula cum callo intus infra sinum, appendice hippocrepidiformi labello vix brevior multoque angustiore, marginibus erectis valde concava, cruribus antice productis divergentibus bene intra marginem in circa $\frac{3}{5}$ partibus supra basin in denticulum terminantibus, 3nervium, inexplanatum c. 0.45 cm longum, 0.25 cm latum, explanatum c. 0.5 cm longum, 0.3 cm latum. *Gynostemium* breve, dorso convexum, c. 0.26 cm longum, clinandrio alte excavato, pariete postico apice

breviter obtusangule triangulo cum dente paulo longiore acuto utrinque, auriculis multo longioribus oblique triangulis plus minusve inaequaliter bidentatis. *Anthera* cucullata, ovata, leviter cordata, apicem versus angustata attenuataque, apice breviter fere aequaliter tridentata, c. 0.13 cm longa. *Pollinia* 6, paulum inaequalia, basi acutissima, oblique clavata, c. 0.1—0.13 cm longa, stipite bipartito, laciniis lineari-lanceolatis, cum glandula elongata lineari c. 0.15 cm longo. *Rostellum* porrectum, elongatum, marginibus incurvis valde canaliculato-concavum, late triangulum, bidentatum, dentibus triangulis verticalibus. *Stigma* semilunatum, margine inferiore rotundatum. *Pes gynostemii* cum ovario angulum acutum faciens, rectus, oblongus, c. 0.16 cm longus. *Ovarium* breve, crassiusculum, 6sulcatum, c. 0.33 cm longum.

SUMATRA. West coast: Goenoeng Kerintji, 1200 m, epiphytical in forest (H. A. B. BÜNNEMEIJER n.8605, 8 March 1920; "flowers white").

Although the appendage of the labellum is really horseshoe-shaped I believe that this plant belongs to the nearer allies of *A. alba* BL. and *A. angustifolia* BL.

Description from a single dried specimen with only one leaf and flowers preserved in alcohol.

Dendrobium (sect. *Rhopalanthè*) ***compressicaule*** J. J. S. n. sp.

Caules approximati, elongati, ramosi, c. 16—48 cm longi, supra basin tenuem valde compressam c. 0.9—3 cm longam ex internodiis 1—2.5 compositam in pseudobulbum valde compressum oblongo-ellipticum c. 2—6.5 cm longum 0.7—1.6 cm latum ex internodiis 2—2.5 compositum dilatati, deinde tennes, valde compressi, c. 0.2—0.4 cm lati, sicco flavi, parte inferiore vaginis tubulosis tecti, supra pseudobulbum foliati. *Folia* patentia, basi leviter torta, lineari-lanceolata, apicem versus angustata, leviter vel vix oblique obtusa, nervis numerosis sicco supra subtusque tenuiter prominentibus, sicco papyracea, c. 4—5 cm longa, 0.6—0.8 cm lata; vaginae internodia aequantes, tubulosae, valde compressae, dente carinato ad apicem laminae opposito. *Inflorescentiae* e nodis ultimis caulium foliatorum defoliatorumque, fasciculatae, brevissimae, vaginulis mox fatiscentibus cinctae, pedunculis abbreviatis. *Flos* haud bene apertus bene 1.1 cm longus. *Sepalum dorsale* ovatum, obtusum, concavum, 5nervium, c. 0.65 cm longum, 0.375 cm latum. *Sepala lateralìa* lacinia longa oblique lineari ad pedem gynostemii decurrentia, marginibus anticis longitudine c. 0.17 cm connata, mentum anguste calcariforme cum ovario angulum rectum faciens apice vix recurvulum obtusum c. 0.775 cm longum formantia, oblique triangula, breviter acutata, vix acuminata, acuta, 7nervia, c. 0.75 cm longa, margine antico c. 1.3 cm, basi 1 cm metientia. *Petala* oblique oblonga, apicem versus vix dilatata, breviter acutata, acuta, superne erosula, 2nervia (an semper ?), c. 0.625 cm longa, 0.2—0.23 cm lata. *Labellum* ungue oblongo c. 0.475 cm longo 0.2 cm lato pedi gynostemii in formam calcaris subcylindrici obtusi adnatum, lamina concava, triloba, explanata cuneato-flabelliformi, 5nervia, nervis exterioribus ramosis, fascia longitudinali

leviter incrassatula infra basin lobi intermedii trilobulato-callosa-terminante instructa, c. 0.95 cm longa, 1 cm lata; lobi laterales erecti, trapezoides basi lati, angulo antico porrecti, obtusi, superne irregulariter serrati, apice libero c. 0.17 cm longi; lobus intermedius transversus, multo latior quam longus, bilobulus, lobulis divergentibus remotis oblique transverse quadrangulis angulis obtusis irregulariter serrulatis, lobulo humillimi leviter rotundato in sinu, c. 0.325 cm longus, 0.7 cm latus. *Gynostemium* brevissimum, absque anthera c. 0.17 cm longum, filamento dentiformi, auriculis oblique triangulis acutis margine antico irregularibus. *Anthera* cucullata, apice rotundato-producto ambitu quinquangularis, c. 0.15 cm lata. *Pes gynostemii* cum ovario angulum rectum faciens, late linearis, canaliculatus cum costa longitudinali apicem attingente, ubi tenuior, infra apicem dentem gerente, c. 0.8 cm longus. *Ovarium* anguste obconicum, sulcis 6 binis approximatis, c. 0.3 cm longum; pedicellus 0.3 cm longus.

SUMATRA. West coast: Goenoeng Kerintji, south slope, 1500 m, epiphytical in forest (H. A. B. BÜNNEMEIJER n.8382, 4 March 1920; "flowers white, inside tinged light violet, spur violet").

This belongs to the group of *D. Blumei* LNDL. and its allies, and has the broad midlobe of the lip in common with *D. tricuspe* LNDL. from Java. It is easily to be distinguished from this species by the oblong not obovate petals and the broad side lobes of the lip.

Description from herbarium and materials preserved in alcohol.

Dendrobium (sect. Rhopalanthæ) **peculiare** J. J. S. n. sp.

Rhizoma repens, breve, valde ramosum, radicibus tenuibus. *Caules* approximati, fasciculati, simplices, superne flexuosi, teretes, ad c. 45 cm longi, supra basin tenuem c. 0.8—1.8 cm longam in pseudobulbum sicco fusiformem rugosum ex internodio unico et e partibus internodiorum adjacentium compositum c. 1.3—2.3 cm longum incrassati, deinde iterum tenues, foliati, internodiis c. 1—4 cm longis. *Folia* patentia, tenuia, teretia, ad c. 5.5—5.75 cm longa, sicco 0.075 cm diam.; vaginae tubulosae. *Inflorescentiae* e parte superiore flexuosa caulium defoliorum fasciculares, abbreviatae, vaginulis cinctae, pedunculis c. 0.17 cm longis, 1floris. *Flores* parvuli, informes, paulum aperti, c. 1.4 cm longi, 1 cm lati, sepalis basi distincte connatis. *Sepalum dorsale* horizontale, incurvum, concavum, triangulum, apicem versus angustatum, obtusum, basi crassum, 3nervium, c. 0.7 cm longum, 0.37 cm latum. *Sepala lateral*ia ad pedem gynostemii valde peculiarem decurrentia, mentum magnum informe cum ovario angulum acutum faciens supra basin incurvum ceterum rectum ample saccato-cylindraceum obtusissimum retusum dorso late canaliculatum nervis leviter impressis bullatum c. 1.2 cm longum 0.7 cm latum magnam partem e pede gynostemii compositum formantia, basi valde rotundata biloba inserta, parte antica oblique triangula, apice recurva, obtusa, 5nervia costa media Sformi, usque ad apicem ovarii c. 0.55 cm, tota 0.9 cm longa, 0.825 cm

lata. *Petala* porrecta, recurvula, leviter convexa, oblique ovata, apice vix contracto truncata et obsolete crenulata, basi producta sepalis adnata, dorso medio leviter longitudinaliter incrassatula, 3nervia, c. 0.46 cm, tota 0.575 cm longa, 0.275 cm lata. *Labellum* parvulum, ungue brevi dilatato tenui apici pedis gynostemii insertum, supra basin valde recurvum, apice brevissime recurvum, marginibus erectis valde concavum, subtrilobum, fascia longitudinali incrassata late lineari e costis 3 parallelis approximatis glabris a flexu in basi lobi intermedii in turmam transversam verrucarum terminante, 3nervium, nervis exterioribus valde ramosis, nervis lateralibus 3—4 inferioribus intus in lobis lateralibus basi excepta prominentibus erosulisque, explanatum cuneato-rotundato-flabellatum, c. 0.6 cm longum, 0.8 cm latum, lobi laterales erecti, margine incurvi, basi lati, oblique trianguli, obtusi, margine postico rotundati, antice truncati et erosulo-serrati; lobus intermedius transversus, brevis, latus, late rotundato-bilobulus, erosulo-serratus, c. 0.1—0.15 cm longus, 0.5 cm latus. *Gynostemium* abbreviatum, leviter a dorso compressum, absque anthera c. 0.15 cm longum, clinandrio alte excavato, transverse ovali, filamento dentiformi-subulato, auriculis obtusis. *Stigma* suborbiculare. *Pes gynostemii* maximus, cum ovario angulum acutum faciens, incurvus, basi satis angustus canaliculatusque, superne valde dilatatus, rotundato-saccatus, apice erecto lato angulato-exciso parti inferiori parallelus, marginibus omnino basi sepalorum lateralium adnatus, costa prominente ab eis separatus, apicem versus intus costa longitudinali in sacco glandulam mediocrem subglobosam gerente instructus, extus bullatus, inexplanatus c. 1.2 cm longus, 0.55 cm latus, antice 0.7 longus. *Ovarium* oblique obconicum, 6sulcatum, c. 0.25 cm longum; pedicellus c. 0.5 cm longus.

SUMATRA. West coast: Goenoeng Kerintji, epiphytical in forest (H. A. B. BÜNNEMEIJER n.8536, 7 March 1920, 1300 m; n.8617, 8 March 1920, 1000 m; n.8718 (?), 12 March 1920, no flowers; n.8839, 15 March 1920, 1600 m; n.8907, 16 March 1920, 1700 m; n.9052, 21 March 1920, 1500 m; "flowers white"). Laras Talang, Goenoeng Talang, 1300 m, waterside (H.A.B. BÜNNEMEIJER n.5658, 13 November 1918, "flowers white").

This is a very interesting species on account of the extraordinary development of the columnfoot. At first sight one gets the impression that the mentum in the ordinary consists for the greater part of the basal portions of the lateral sepals. On closer examination, however, it turns out that the foot is very large, broadly saccate and upcurved at the apex. Over the whole length it is adnate to the lateral sepals but separated from these by a prominent rib.

Description from herbarium and flowers preserved in alcohol.

***Dendrobium* (sect. *Oxystophyllum*) *validipecten* J.J.S. n. sp.**

Rhizoma breve, valde ramosum, radicibus tenuibus, vaginis imbricantibus conduplicatis acutis superioribus accrescentibus tectum. *Caules* elongati, compressi, foliati, c. 20—40 cm longi, internodiis c. 1.5 cm longis. *Folia* equitantia, articulata, erecto-patentia, lateraliter compressa, oblique lineari-

lanceolata, apicem versus angustata, acuta, dorso subrecta, margine superiore inconspicue curvula, inferne supra fissa, basi oblique angulato-rotundata, insertione valde obliqua, carnosa, c. 3.8—5.6 cm longa, basi 0.825—1.1 cm alta, apice non fisso c. 1.5—2.6 cm longo, 0.57—0.7 cm alto; vaginae lateraliter compresso-tubulosae, apice valde obliquae. *Inflorescentiae* terminales (pseudo-terminales?) et laterales, breves, ramosae, vaginulis imbricantibus basi tubulosis ceterum conduplicatis lateraliter compressis acute acuminatis carinatis superne accrescentibus ad c. 1.2 cm longis tectae. *Flores* c. 1.2 cm lati, 1.25 cm longi, carnosii. *Sepalum dorsale* erectum, recurvulum, convexum, ovatum, rotundatum, dorso infra apicem minute conico-apiculatum, 3nervium, c. 0.6 cm longum, 0.38 cm latum. *Sepala lateralialia* ad pedem gynostemii decurrentia, mentum conspicuum cum ovario angulum acutum faciens dorso valde incurvum late conicum truncatum non retusum formantia, divergentia, basi concava, superne leviter convexa, oblique triangula, obtusa, minute apiculata, basi oblique rotundata, 3nervia, bene 0.7 cm longa, margine antico 1 cm, basi 0.93 cm metientia. *Petala* oblique oblonga, c. $\frac{2}{5}$ partibus superioribus leviter contracta, tenuius marginata et minute erosula, obtusa, vix apiculata, dorso in medio leviter longitudinaliter obtusangule incrassata, 1nervia, c. 0.57 cm longa, 0.27—0.275 cm lata. *Labellum* cum pede gynostemii angulum acutum faciens, in $\frac{2}{5}$ partibus supra basin obtusangule recurvum, carnosum, subtus convexum, supra canaliculatum cum lateralibus convexis, in $\frac{1}{3}$ infra apicem magis excavatum, ambitu subspathulato-oblongum, margine omnino papillosum, 3nervium, c. 0.9 cm longum, $\frac{1}{4}$ parte inferiore (hypochoylio) unguiculato-contracta, transverse quadrangula, c. 0.25 cm lata, parte mediana (mesochylio) quadrato, angulis basilaribus rotundato, c. 0.45 cm lato, apice (epichylio) rotundato-dilatato, transverse ovali, apice rotundato-truncato vel retuso, erosulo, supra convexo-incrassato verrucosoque, subtus infra apicem callo conspicuo deorsum spectante conico instructo, bene 0.3 cm longo, bene 0.5 cm lato. *Gynostemium* brevissimum, dorso convexum, absque anthera c. 0.125 cm longum, clinandrio concavo denticulato. *Anthera* cucullata, antice visa semielliptica, apice truncata, minute cellulosa, 0.16 cm lata. *Pollinia* 4, lateraliter compressa, extus convexa, oblique rotundato-triangula, 0.06 cm lata, appendiculata. *Rostellum* leviter rotundatum, convexum. *Stigma* transverse oblongo-semiorbiculare. *Pes gynostemii* cum ovario angulum acutum faciens, incurvus, lineari-oblongus, truncatus, crasse carnosus, c. 0.625 cm longus. *Ovarium* c. 0.25 cm longum.

SUMATRA. West coast: Goenoeng Kerintji, 1700 m, epiphytcal in forest (H.A.B. BÜNNEMEIJER n.8900, 16 March 1920, "flowers shining brown").

This differs from *D. deliense* SCHLTR. by the larger leaves, terminal and lateral inflorescences, the petals contracted in the upper part, the rugose thickened part of the lip being much shorter than half the lip, and from *D. tropidoneuron* SCHLTR. by the much longer stems, larger leaves and flowers, and the shape of the petals and lip.

Description from herbarium and flowers preserved in alcohol.

Dendrobium (sect. *Oxystophyllum*) **longipecten** J. J. S. n. sp.

Caules elongati, ramosi, tenues, c. 49 cm longi, cum foliis c. 3—3.4 cm lati, internodiis 0.65—0.75 cm longis. *Folia* equitantia, articulata, patentia, oblique oblongo-triangularia, dorso subrecta, basi tantum leviter rotundata, margine superiore distincte curvata, acuta, acute apiculata, basi supra fissa, carnosae, supra c. 2.2—2.5 cm, dorso 2.5—2.9 cm longae, basi 0.65—0.8 cm latae, apice non fissae 0.75—1 cm longae, 0.5—0.57 cm latae; vaginae tubulosae, lateraliter compressae, valde obliquae, antice membranaceae. *Inflorescentiae* axillares, breves, pedunculatae, capituliformes, curvatae, vaginulis dense imbricantibus, basi tubulosae, apice concavis, acutis, superne accrescentibus. *Flores* carnosae, c. 0.93 cm longae, 0.87 cm latae. *Sepalum dorsale* ovario continuum, horizontale, concavum, brevissime acutatum, basi latum, 3nervium, c. 0.5 cm longum, 0.34 cm latum. *Sepala lateralalia* ad pedem gynostemii decurrentia, mentum late conicum cum ovario angulum acutum fere rectum faciens dorso incurvum convexumque apice angustius obtusum leviter retusum c. 0.55 cm longum formantia, margine antico a basi divergentia, oblique triangularia, brevissime apiculato-acuminata, basi concava, apice convexa, 5nervia, c. 0.475 cm longa, margine antico 0.675 cm, basi 0.7 cm metientia. *Petala* oblique oblonga, medio leviter rhombo-dilatata, apice manca, leviter convexa, dorso medio leviter longitudinaliter incrassata, 1nervia, c. 0.4 cm longa, 0.225 cm lata. *Labellum* paulum infra medium obtusangule arcuato-recurvum, carnosum, dimidio inferiore intus fascia longitudinali late lineari incrassata margine leviter convexa laevi donatum, antice leviter transverse concavum, parte apicali (epichylia) convexo, $\frac{3}{5}$ partibus superioribus erosulo-crenulatum et intra marginem sulcis irregularibus verruculosum, margine omnino minute papillosum, callo late conico deorsum spectante postice convexo-decurrente subtus bene infra apicem, explanatum oblongum, basin truncatam versus angustatum, in bene $\frac{2}{3}$ supra basin leviter constrictum, c. 0.8 cm longum, basi 0.175 cm, medio 0.35 cm latum, epichylia transverse subovali truncato c. 0.37 cm lato. *Gynostemium* breve, dorso convexum, sparse verruculoso-papillosum, absque anthera c. 0.2 cm longum, clinandrio concavo transverse subovali, filamento lineari auriculis bene longiore; auriculis subsemiorbicularibus. *Anthera* cucullata, mitriformis, apice truncata, dorso retusa, celluloso-verruculosa, c. 0.15 cm lata. *Rostellum* breve. *Stigma* transversum. *Pes gynostemii* cum ovario angulum subrectum faciens, incurvus, late linearis, truncatus, carnosus, c. 0.6 cm longus. *Ovarium* oblique obconicum, c. 0.36 cm longum. *Capsula* immatura flore coronata, ovoidea, sexangulata, c. 0.95 cm longa, 0.6 cm diam.

SUMATRA. West coast: Matoer, Poentjak Boekit (E. JACOBSON, cult. sub. n. 821; "bracts transparently membranous purplish brown, ovary light purplish brown, sepals and petals brownish purple, lip basal half brownish purple, apical half dark purple, column light purple, apex purple, anther transparently yellowish with a purple stain"). BENGKOELOE: Soeban Ajam (Exp. E. JACOBSON, AJOEB n. 330, July 1916).

Resembling *D. paniferum* J. J. S. from Java but with thinner stems, no terminal inflorescences, a papillate column, a differently shaped lip.

Description from herbarium and flowers preserved in alcohol.

Dendrobium (sect. *Sarcopodium*) **brevibulbum** J. J. S. nom. nov. — *Sarcopodium pulchellum* RIDL. in Journ. F. M. S. Mus. VIII (1917), 93.

Planta parva. *Rhizoma* elongatum, repens, ramosum, prope pseudobulbos radicans, vaginis tubulosis breviter acutatis sicco cinnamomeis et dense prominenter nervosis tectum. *Pseudobuli* c. 2—2.8 cm dissiti, breviter oblique ovoidei, angulati, sicco ochracei, nitidi, rugosi, c. 0.7—0.9 cm longi, 2folii. *Folia* oblonga, apicem versus paululum angustata, leviter inaequaliter rotundato-bilobula, basi breviter canaliculato-contracta, costa media supra tenuiter sulcata, firmiter coriacea, e spiritu vini c. 3—4 cm longa, 1.1 cm lata. *Inflorescentia* axillaris, erecta, brevissima, 1flora, spatha c. 0.9 cm longa, pedunculo 0.9 cm longo. *Bractea* involuta, semiovalis, rotundato-obtusissima, basi lata, c. 5nervia, tenuis, c. 0.6 cm longa, 0.5 cm lata. *Flos* mediocris. *Sepalum dorsale* oblongum, apice angustatum, obtusum, concavum, 7nervium, c. 1.95 cm longum, 0.7 cm latum. *Sepala lateral*ia reflexa, apice recurva, basi concava, ceterum convexa, oblique oblongo-triangularia, acutata, obtusiuscula, 7nervia, c. 1.9 cm longa, 0.85 cm lata. *Petala* oblique anguste lanceolata, obtusiuscula, 5nervia, c. 2.2 cm longa, 0.5 cm lata. *Labellum* porrectum, leviter recurvum, 3lobum, costis 2 longitudinalibus brevibus basin versus divergentibus irregulariter lobulatis ad basin, callis 3 longitudinalibus altioribus integris infra basin lobi intermedii, callo intermedio ceteris paulo longiore, explanatum bene 1.5 cm, usque ad apicem loborum lateralium 1.1 cm longum; lobi laterales erecti, margine superiore incurvi, margine antico angustissime recurvulo-convexi, parallelogrammiformes, postice rotundati, antice truncati, angulis anticis obtusi, hypochylium semiorbiculare bene 1.4 cm latum formantes; lobus intermedius porrectus, apice recurvus, marginibus recurvis bene convexus, nervis 3 longitudinalibus approximatis cum nervis lateralibus patentibus leviter ramosis incrassatis verruculosisque, orbiculari-ovatum, obtusum, c. 0.7 cm longum, 0.775 cm latum. *Gynostemium* satis gracile, curvum, dorso convexum, subtus concavum, apice producto contracto triangulo trigono anguste obtuso, c. 1 cm longum, clinandrio concavo cum costula longitudinali. *Rostellum* breviter rotundatum. *Stigma* concavum, rotundato-quadrangulum. *Pes gynostemii* cum ovario angulum acutum, cum gynostemio angulum obtusum faciens, oblongo-quadrangulus, truncatus, margine angusto incurvo, c. 0.5 cm longus, 0.375 cm latus. *Ovarium* pedicellatum teres, c. 2.85 cm longum.

SUMATRA. West coast: Goenoeng Kerintji, 2200 m, epiphytically in forest (H. A. B. BÜNNEMEIJER n. 10098, 6 May 1920; "flowers light yellowish green, lip white streaked violet inside, midlobe with a white border, a red-brown blotch and yellow at the base").

I could not retain RIDLEY's specific name because of *D. pulchellum* ROXB.

It is a near ally of *D. Wichersii* SCHLTR., *D. laurifolium* KRÄNZL., *D. dempoense* J. J. S., etc. but at once recognizable by the small dimensions and one-flowered inflorescences.

Description from a dried specimen and flowers preserved in alcohol.

Dendrobium (sect. Calcarifera) **compressimentum** J. J. S. n. sp.

Caules approximati, elongati, simplices, superne flexuosi, foliati, c. 67—84 cm longi, internodiis ad c. 4—4.5 cm longis, superioribus decrescentibus ad c. 0.7—0.8 cm. *Folia* patentia, lanceolata ad ovato-lanceolata, sensim angustata vel acuminata, oblique acuta basi semitorta, nervis majoribus c. 5 sicco dorso prominentibus pluribusque tenuioribus, sicco rigidule papyracea, c. 9.25—13 cm longa, 2—2.85 cm lata; vaginae tubulosae, internodia subaequant, apice truncatae et antice leviter vel vix rotundato-excisae, sicco prominenter nervosae, fusco-punctatae. *Inflorescentiae* e nodis superioribus caulium defoliorum, brevissimae, 1-pauciflorae. *Bractee* adpressae, triangulae, concavae, c. 0.5 cm longae. *Flos* majusculus, c. 3.5 cm longus. *Sepalum dorsale* ovatum, apice angustatum, obtusum, 7nervium, tenue, c. 1.6 cm longum, fere 0.9 cm latum. *Sepala lateral*ia lacinia conspicua latissima oblique oblongo-obovata concava ad pedem gynostemii decurrentia, mentum magnum ovario subparallelum incurvum lateraliter compressum oblique oblongum parte superiore antice rotundato-dilatatum et marginibus anticis connatis saccatum apice rotundato-truncatum dorso convexo-carinatum c. 1.7 cm longum inferne 0.63 cm superne 0.95 cm latum formantia, c. 9nervia, costa media dorso incrassata, concava, parte antica triangula, margine postico leviter rotundata, satis acuta, usque ad apicem ovarii c. 1.63 cm, tota 3.1 cm longa, parte antica 1 cm lata, lacinia decurrente c. 1.5 cm longa, 1 cm lata. *Petala* oblique rhombea, obtusa, dimidio superiore irregulariter marginata, 3nervia, c. 1.7 cm longa, 0.9—0.95 cm lata. *Labellum* apice pedis gynostemii insertum, unguiculatum, concavum, gynostemium bene superans, basi arcuato-incurvum, in bene $\frac{1}{4}$ supra basin rotundato-rectangle recurvum, deinde incurvum, lobo intermedio recurvum (an semper?), 7nervium, inexplanatum c. 2.85 cm longum, explanatum ex ungue late lineari intus in flexu appendice reversa transversa recta ungui aequilata triangula obtusa instructo c. 1.4 longo 0.5 cm lato in laminam cuneato-flabelliformem 3lobam c. 2.2 cm longam 2.3 cm latam supra basin callo porrecto triangulo donatam dilatatum; lobi laterales erecti, oblique trianguli, margine postico leviter rotundati, margine antico subirregulares, obtusi; lobi laterales cum lobo intermedio angulum obtusum facientes, transverse oblongus, apice late rotundato-bilobulus, sinu acutangolo, undulatus, c. 0.6 cm longus, 1.24 cm latus. *Gynostemium* brevissimum, crassum, facie antica rotundato-convexum, cum anthera c. 0.45 cm longum, clinandrio excavato, transverse quadrangulo, filamento cum gynostemio angulum faciente, recto, subulato, auriculis porrectis, oblique quadrangulis, apice oblique truncatis minute denticulatis. *Anthera* cucullata, apice in appendiculam brevem antherae aequilatam angulato-rotundatam

apice recurvulam puberulamque producta, dorso rotundato-gibbosa, thecis convexis, c. 0.3 cm lata. *Pollinia* 4, oblonga, 2 interiora paulo angustiora, c. 0.225 cm longa. *Stigma* magnum, alte excavatum, urceolato-quadrangulum, margine elevatum, costulis 3 longitudinalibus. *Pes gynostemii* ovario subparallelus, superne incurvus, linearis, canaliculatus, apice obtusangule incurvus et dorso excavatione longitudinali instructus, canalicula intus infra apicem angustata apice dilatata et costa longitudinali lateraliter compressa obtuse terminante donata, c. 1.8 cm longus. *Ovarium* 6sulcatum, c. 0.6 cm longum, cum pedicello 1.6 cm longo leviter sigmoideum.

SUMATRA. Padangsche Bovenlanden: Goenoeng Malintang, 1430 m, epiphytical in forest (H.A.B. BÜNNEMEIJER n. 4253, 3 August 1918, "flowers light yellow with 2 red streaks near the column"). Laras Talang, Boekit Gombak, 1450 m, epiphytical in forest (H.A.B. BÜNNEMEIJER n. 5682, 14 November 1918; "flowers greenish yellow"). Boekit Niroe, 1800 m, epiphytical in forest (H.A.B. BÜNNEMEIJER, 10 November 1918, "flowers yellow").

Allied to *D. sanguinolentum* LNDL. but with a much longer mentum and claw of the lip, the lip with a much shorter appendage on the claw and a distinct callus on the blade, and a quite different anther. It also resembles some forms of *D. pedicellatum* J. J. S. but in this species the lip is adnate to the column foot at the base, without a callus on the blade, the column much longer and the colour different.

Description from herbarium and a flower preserved in alcohol.

Bulbophyllum (sect. Monilibulbum) **Tapirus** J. J. S. n. sp.

Rhizoma repens, radicans. *Pseudobulbi* basi rhizomati adnati, apice incurvi. *Folium* lanceolatum, obtusum, basi sensim angustatum, sicco c. 3.5—4 cm longum. *Inflorescentia* 1flora, pedunculo tenui, c. 6 cm longo. *Bractea* tubulosa, apice oblique truncata, acuta, superne carinata, c. 0.47 cm longa. *Flos* majusculus. *Sepalum dorsale* e basi ovato-oblonga sensim longe acuminatum, acutum, apiculatum, margine inferne minutissime papillosum, nervis 3 exterioribus ramosis omnibus dorso prominentibus, bene 2 cm longum, fere 0.5 cm latum. *Sepala lateral*ia marginibus basi sepalum dorsale anguste obtegentia e basi oblique ovato-oblonga sensim longe angustata, apice canaliculata, acutiuscula, margine antico praesertim versus basin minutissime papillosa, nervis 5 exterioribus ramosis omnibus dorso prominentibus, c. 2.1 cm longa, bene 0.4 cm lata. *Petala* parva, porrecta, gynostemium tectiformi-obtegentia, oblique spatulato-obovata, oblique rotundata, $\frac{2}{5}$ partibus superioribus papilloso-ciliolata et intus papillosa, c. 0.18 cm longa, 0.1 cm, basi 0.05 cm lata. *Labellum* valde mobile, parvum, basi brevissime unguiculato-contractum, marginibus basi erectis et utrinque in lobum conspicuum reversum oblique rotundatum dilatatis alte canaliculatum, recurvulum, marginibus supra basin valde recurvis superne subtus contiguis valde convexum superne tubulosum et breviter proboscidiiformi-contractum, obtusum, subtus

longitudinaliter sulcatum, glabrum, laeve, carnosulum, totum 0.38 cm, a basi 0.3 cm longum, 0.16 cm latum, parte contracta c. 0.12 cm longa. *Gynostemium* parvum, ovario multo tenuius, dorso convexum, c. 0.15 cm longum, clinandrio concavo, pariete postico producto quadrangulo truncato, auriculis porrectis, parallelis, antheram longe superantibus, subulatis, rectis, apice breviter incurvis. *Anthera* parva, cucullata, transverse ovali-reniformis, connectivo valde incrassato, apice conspicue obtuse gibboso-producto papilloso, c. 0.05 cm lata. *Rostellum* porrectum, triangulum. *Stigma* conspicuum, faciem inferiorem gynostemii fere omnino occupans, obverse triangulum. *Ovarium* obconicum, 6sulcatum, c. 0.3 cm longum; pedicellus c. 1.4 cm longus, fere 0.4 cm supra basin articulatus. *Capsula* fusiformi-clavata, basi elongato-obconico-contracta, c. 2—2.2 cm longa, 0.525 cm diam., verisimiliter rimis 2 dehiscens.

SUMATRA. West coast: Natal, Sawah Baroe (A. V. THEUNISSEN, cult. in Hort. E. JACOBSON sub nrs. 1480 and 1495, "leaves dark dead green, pseudobulbs dead green, peduncle light green, bract transparently very light green, pedicel red-brown, ovary brownish green, sepals basal half dark green, apical half cream-yellow, a little terracotta at the base, petals transparently yellow, with a dark purplish brown longitudinal streak broadened towards the apex, bordered a little purplish brown, lip dark terracotta, column purplish chocolate-brown, auricles light terracotta with a yellow-brown apex, anther greenish").

Allied to *B. Stormii* J. J. S. which has also a smooth lip, but differing in the obovate petals, the lip contracted at the apex and the colour.

Part of the material being tainted the description of the vegetative parts wants complement.

***Bulbophyllum* (sect. *Desmosanthes*) *ovatolanceatum* J. J. S. n. sp.**

Rhizoma elongatum, dependens, flexuosum et geniculato-curvedum, plerumque dichotome ramosum, tenue, teres, c. 0.1 cm diam., radicans praesertim ad basin, radicibus quam rhizoma vix tenuioribus, vaginis tubulosis tectum. *Pseudobulbi* c. 1.5—5 cm dissiti, cum rhizomate angulum acutum facientes, recti vel curvati, cylindrici (e spiritu vini), basi apiceque obtusi, carnosii, c. 1.5—2.3 cm longi, 0.7 cm diam. *Folium* anguste ovato-lanceolatum, apicem versus sensim angustatum, brevissime acutum, subapiculatum, basi breviter cuneata plus minusve canaliculato-petiolato-contractum, saepe leviter falcatum, sicco papyraceum, c. 7—10 cm longum, 0.6—1.3 cm latum. *Inflorescentiae* e nodis rhizomatis praesertim e basi pseudobulborum, brevissimae, 2florae, pedunculo rhizomati adpresso, furfuraceo-punctato, magnam partem vaginulis tubulosis acutis carinatis tecto. *Bractae* ovario adpressae et multo longiores, rachidem amplexantes, ovatae, marginibus incurvis subulato-acuminatae, nervo 1 dorso prominente, dorso parce furfuraceae, c. 0.67 cm longae, 0.325 cm latae. *Flores* c. 1.6 cm longi, sepalis petalisque parallelis. *Sepalum dorsale* horizontale, incurvulum, concavum, marginibus medio recurvis convexis, oblongo-triangulum, acutum, longe

subulato-acuminatum, 3nervium, tenue, totum c. 1.4 cm longum, 0.475 cm latum, acumine 0.37 cm longo. *Sepala lateral*a canaliculata cum lateribus convexis, oblique oblongo-ovato-triangulara, marginibus incurvis sensim longe canaliculato-subulato-acuminata, subfalcata, 3nervia, c. 1.675 cm longa, 0.425 cm lata. *Petala* parva, porrecta, verticalia, late oblique elliptica, apice recurvulo obtusa, basi brevissime contracta, margine utrinque praesertim medio minute erosula superne minute papillosa, 1nervia, c. 0.425 cm longa, bene 0.3 cm lata. *Labellum* parvum, mobile, bene infra basin insertum vel potius basi reverse obtuse bilobulum lobulis lamella transversa horizontali aequilonga carnosula subtus leviter concava truncata repandula conjunctis, in c. $\frac{1}{3}$ — $\frac{3}{5}$ supra basin rotundato-rectangle recurvum, ambitu oblongum, marginibus inferne patentissimis in bene $\frac{1}{3}$ supra basin valde incurvis rotundatisque superne angustatum canaliculatumque, apice marginibus recurvulis convexo acute triangulo-acuminatum, costis 2 longitudinalibus parallelis satis remotis obtusis intus in $\frac{2}{5}$ partibus inferioribus, subtus supra locum insertionis leviter ventricosum cum costis 2 longitudinalibus crassiusculis canalicula separatis, canalicula basi angusta superne dilatata apicem attingente cum incrassatione convexa in flexu, marginibus magna parte minutissime papillosum, 3nervium, inexplanatum c. 0.325 cm longum, basi 0.2 cm latum. *Gynostemium* breve, crassum, marginibus sensim in pedem gynostemii decurrentibus, dorso infra antheram gibbosum c. 0.2 cm longum, clinandrio excavato, pariete postico breviter aequilateraliter trapeziformi-producto truncato subtus concavo, filamento minutissime apiculato, auriculis porrectis parallelis, e basi dilatata longe filiformi-subulatis, falcatis, antheram bene superantibus. *Anthera* cucullata, ambitu ovato-triangulara, e basi transverse ovali triangulo-producta, obtusa, fere 0.1 cm lata. *Pollinia* 4, oblique rotundato-triangulara, lateraliter compressa, extus convexa, c. 0.05 cm longa, interiora multo minora, oblique lanceolata. *Stigma* alte excavatum, longitudinale, quinquangulatum, basi acuta in sulcum longitudinale in partem inferiorem pedis gynostemii decurrentem productum. *Pes gynostemii* cum ovario angulum obtusum faciens, e basi dilatata sensim lineari-angustatus, fere dimidio inferiore sepalis lateralibus adnatus, parte superiore libera incurvus, truncatus, dorso versus apicem longitudinaliter sulcatus, inexplanatus c. 0.25 cm longus. *Ovarium* breve, obconicum, rotundato-trigonum, 6sulcatum, sparse furfuraceopunctatum, cum pedicello brevissimo c. 0.275 cm longum.

SUMATRA. West coast: Goenoeng Merapi, 1900 m, epiphytial in forest (H.A.B. BÜNNEMEIJER n.4664, 18 September 1918; "flowers yellow, tips almost orange, very light yellow at the base").

A near ally of *B. angustifolium* LNDL., *B. obtusum* LNDL., *B. xanthanthum* SCHLTR., *B. appressicaule* RIDL., etc. but distinguished by the long thin rhizome, shape of the leaves, 2flowered inflorescences, rather larger flowers with long acuminate sepals; in the shape of the lip it somewhat recalls of *B. capitatum* LNDL.

Description from herbarium and flowers preserved in alcohol.

Bulbophyllum (sect. *Aphanobulbon*) **semipellucidum** J. J. S. n. sp.

Rhizoma fruticiforme, patens et dependens, ramosum, teres, c. 25 cm longum, sicco 0.18 cm diam., praesertim ad basin radicans, radicibus crassiusculis, initio vaginis tubulosis acutis ad obtusis carinatis tectum. *Pseudobulbi* parvi, c. 1.4—2 cm dissiti, rhizomati adnati, subteretes, basi apiceque truncati, c. 0.2 cm longi, 0.15 cm diam., 1folii. *Folium* oblongum, apice suboblique obtusum, basi cuneata abrupte in petiolum contractum, costa media supra sulcata subtus prominente, carnosum, sicco semipellucidum, c. 3.5—6.5 cm longum, 1.3—1.7 cm latum; petiolus canaliculatus, c. 0.4—0.5 cm longus. *Inflorescentiae* brevissimae, 2florae, pedunculo c. 0.5 cm longo, omnino vaginulis tubulosis sese amplectentibus membranaceis tecto. *Bractee* parvae, rachidem amplectentes, acutae, c. 0.15 cm longae. *Flores* bene 1 cm lati, 0.8 cm longi, sepalis dorso in spiritu vini minute furfuraceo punctulatis. *Sepalum dorsale* horizontale, apice recurvulum, basi concavum, ceterum convexum, oblongum, $\frac{2}{5}$ partibus inferioribus leviter contractum, apice obtusum cum apiculo reverso obtuse conico, nervis 3 dorso prominentibus, c. 0.75 cm longum, 0.28 cm latum. *Sepala lateral*ia cum pede gynostemii mentum breve cum ovario angulum acutum faciens latum angulatum late obtusum dorso late canaliculatum formantia, divergentia, recurvula, concava, lateribus superne convexis, oblique subovato-triangu^{la}, obtusa, conspicue acute conico-apiculata, nervis 3 dorso prominentibus, tota c. 0.8 cm longa, 0.46 cm lata, mucrone 0.1 cm longo. *Petala* bene minora, porrecta, e basi breviter unguiculata oblique subovato-elliptica, apicem versus angustata, acutiuscula, margine anguste recurva, magna parte intus papillosa, 1nervia, nervo dorso convexo-incrassato, tota c. 0.4 cm longa, ungue 0.05 cm longo, 0.15 cm lata. *Labellum* valde mobile, recurvulum, marginibus basi erectis supra basin recurvis, convexum cum canalicula longitudinali basi angusta ceterum lata costis 2 satis conspicuis superne decrescentibus sed apicem attingentibus basi utraque in callum parvum terminantibus limitata, costula inconspicua longitudinali in canalicula versus apicem, leviter undulatum, ambitu ovale, obtusum, basi truncatum, margine basi excepta papilloso-ciliolatum, 3nervium, nervis subtus prominentibus exterioribus in parte inferiore tantum intermedia basi excepta tota longitudine sulco longitudinali instructis, tenue, bene 0.5 cm longum, 0.3 cm latum. *Gynostemium* breve, cum anthera 0.125 cm longum, clinandrio concavo, pariete postico in lobum satis conspicuum porrectum quinquangulare basi constrictum apice obtuse bilobulum producto, filamento inter lobulos sito lineari, auriculis porrectis, parallelis, e basi oblique triangu^{la} subulato-acuminatis, margine antico conspicue obtusangule dilatatis, apicem gynostemii superantibus, anthera brevioribus. *Anthera* cucullata, ambitu late ovato-triangu^{la}, obtusa, connectivo convexo, 0.08 cm lata. *Pollinia* 2, in corpusculum subglobosum unita, extus convexa, intus plana, c. 0.06 cm diam. *Stigma* alte excavatum, subquinquangulare. *Pes gynostemii* cum ovario angulum anguste acutum faciens, apice incurvus, linearis, apice brevissime a sepalis lateralibus liber

vix dilatatus et breviter angulato-incisus, parte inferiore sub stigmate callo conspicuo longitudinali a latere viso triangulo obtuso margine inferiore cum pede angulum rectum faciente donatus, c. 0.275 cm longus. *Ovarium* curvatum, teres, 6sulcatum, apice valde obliquum, furfuraceo-punctatum, c. 0.375 cm longum; pedicellus vix tenuior, vix punctatus, c. 0.2 cm longus.

SUMATRA. West coast: Goenoeng Kerintji, epiphytical in forest (H. A. B. BÜNNEMEIJER n.9078, 22 March 1920, 1500 m, "flowers light orange"; n.8989, 19 March 1920, 1600 m, "flowers orange").

Near *B. mutabile* LNDL. but larger, with much broader leaves, larger flowers, a very conspicuous callus on the column foot, thus recalling of *B. ceratostyloides* SCHLTR. from Selebes, and the column ending in a quin-quangular lobe refuse at the tip.

The leaves are transparent when dry.

Description from herbarium and materials preserved in alcohol.

Bulbophyllum (sect. Aphanobulbon) **cyclophoroides** J. J. S. n. sp.

Rhizoma elongatum, repens, ramosum, flexuosum, sicco c. 0.3 cm diam, vaginis tubulosis, superioribus obtusis apiculatis, apicem versus carinatis, minute furfuraceo-puncticulatis. *Pseudobulbi* parvi, c. 2.5—4 cm distantes, disciformes, c. 0.15 cm alti, 0.45 cm diam. *Folium* parvum, erectum, anguste oblongum, obtusum rotundatumve, sicco saepe apice breviter conduplicato subapiculatum, basi breviter acute cuneata conduplicata in petiolum contractum, marginibus (sicco) revolutis, costa media supra versus apicem sulcata subtus prominente, rigide coriaceum, c. 5.57—11.5 cm longum, sicco 1.25—1.6 cm latum; petiolus conduplicato-canaliculatus, c. 0.8—1.9 cm longus. *Inflorescentiae* 1—2 e basi pseudobulborum, erectae, laxius pluriflorae, pedunculo c. 4.5—6.5 cm longo, vaginulis c. 6 satis ample tubulosis superioribus antice longe apertis obtusis apiculatis superne carinatis minute furfuraceo-puncticulatis ad c. 0.7—0.9 cm longis donato, rachide inaequaliter quadrangulata, c. 4—5.5 cm longa. *Bractee* oblongae, leviter acuminato-angustatae, acutae, concavae, 1nerviae, c. 0.575 cm longae, 0.2 cm latae. *Flores* c. 11—14, c. 0.85—0.95 cm lati, sepalis dorso leviter furfuraceo-puncticulatis. *Sepalum dorsale* ovario continuum, horizontale, apice leviter recurvum, parte inferiore marginibus incurvulis concavum, oblongum, subulato-acuminatum, 3nervium, c. 0.57 cm longum, 0.2 cm latum. *Sepala lateralialia* cum pede gynostemii mentum breve latum cum ovario angulum subrectum faciens incurvum dorso late longitudinaliter canaliculatum formantia, divergentia, angulum acutum facientia, apice plus minusve recurvula, praesertim ad basin concava, oblique subovato-triangula, longe subulato-acuminata, 3nervia, c. 0.7 cm longa, 0.4 cm lata. *Petala* parva, porrecta, parallela, recta, rhombeo-lanceolata, obtusa, leviter convexa, parte antica minute papillosa, nervo 1 dorso vix incrassata, bene 0.3 cm longa, 0.1 cm lata. *Labellum* mobile, in $\frac{2}{5}$ partibus supra basin obtusangule recurvum, parte inferiore marginibus erectis basi rotundatis canaliculatum, canalicula incrassationi-

bus longitudinalibus leviter convexis in fundo angustata, callis 2 convexis ad basin, parte antica deorsum spectante, convexa cum canalicula longitudinali bene infra apicem evanescente, margine praesertim apice minute papillosa, inexplanatum oblongum, obtusum, 3nervium, tenuiusculum, c. 0.375 cm longum, 0.2 cm latum. *Gynostemium* breve, crassum, 3lobum, cum anthera bene 0.1 cm longum, clinandrio concavo, anguste longitudinaliter semioblongo, pariete in lobulum 4- vel potius 6angulatum truncatum producto, auriculis porrectis, e basi latissima margine antico obtusangule dilatata breviter subulato-acuminatis, anthera conspicue brevioribus, subrectis, extus costa longitudinali usque ad basin gynostemii decurrente instructis. *Anthera* cucullata, auriculas longe superans, ovata, apice breviter rotundato-producta, tenuis, c. 0.06 cm lata. *Pollinia* rotundato-quadrangula, extus convexa. *Stigma* alte excavatum, sexangulare, apice leviter contractum. *Pes gynostemii* cum ovario angulum rectum faciens, praesertim superne incurvulus, linearis, apice ultimo tantum a sepalis lateralibus libero paululo dilatato truncatus, $\frac{2}{5}$ partibus sub stigmate callo magno longitudinali lateraliter compresso a latere viso triangulo obtuso margine antico curvato margine inferiore cum pede angulum rectum faciente praeditus, fere 0.25 cm longus. *Ovarium* oblique obconicum, 6sulcatum, c. 0.25 cm longum; pedicellus paulo tenuior, 0.1 cm longus.

SUMATRA. West coast: Goenoeng Merapi, 1150 m, on coffee-tree (H. A. B. BÜNNEMEIJER n.4910, 26 September 1918; "flowers white to light green").

A rather small species with a long creeping rhizome, narrowly oblong, very blunt, shortly petiolate, stiff leaves and a rather few-flowered spike nearly equalling the leaves in length.

Description from herbarium and flowers preserved in alcohol.

Bulbophyllum (sect. *Aphanobulbon*) **aurereum** J. J. S. n. sp.

Rhizoma validum, repens, teres, sicco c. 0.5 cm diam., radicans, vaginis tubulosis membranaceis ultimis basin petioli et basin pedunculi amplexantibus ad c. 6 cm longis tectum. *Pseudobulbi* c. 4 cm dissiti, minimi, disciformes, sicco rugulosi, c. 0.175 cm alti, 0.4 cm diam., 1folii. *Folium* erectum, petiolatum, lanceolato-loriforme, obtusum, basi abrupte in petiolum contractum, margine acutum, sicco rigidissime coriaceum, c. 12—13.5 cm longum, 2.45 cm latum; petiolus supra canaliculatus, c. 4.5—5.5 cm longus. *Inflorescentiae* e basi pseudobulborum, elongatae, dense multiflorae, pedunculo c. 21.5 cm longo, vaginis c. 7 longe tubulosis superne paulum ampliatis obtusis breviterque apiculatis ad acutis carinatis sese partim amplexantibus ad c. 6 cm longis omnino obtecto, rachide multicostata, c. 23 cm longa. *Bractae* lineari-subulatae, acutae, concavae, 1nerviae, c. 0.73 cm longae, 0.12 cm latae. *Flores* c. 0.8—0.9 cm lati. *Sepalum dorsale* horizontale, triangulo-lanceolatum, subulato-acuminatum, leviter concavum, 3nervium, c. 0.525 cm longum, 0.16 cm latum. *Sepala lateral*ia divergentia, oblique lanceolato-triangula, margine antico basi leviter dilatata, sensim subulato-acuminata, concava praesertim

ad basin, 3nervia, c. 0.6 cm longa, basi rotundata c. 0.25 cm supra basin 0.17 cm lata. *Petala* parva, porrecta, verticalia, late linearia, falcata, obtusa, praesertim apice convexa, dorso ad apicem incrassata, 1nervia, c. 0.2 cm longa, 0.05 cm lata. *Labellum* mobile, supra basin rotundato-recurvum, marginibus dimidio superiore recurvis distincte 3lobum, gynostemium longe superans, dimidio inferiore lobis lateralibus rotundatis erectis late canaliculatum, costis 2 longitudinalibus canalicula angusta cum costula inconspicua separatis in parte inferiore, in flexu terminantibus, lobo intermedio leviter recurvulo, oblongo, obtuso, convexo, minute papilloso, costis 2 longitudinalibus canalicula angusta costula inconspicua donata separatis in basi lobi divergentibus et in basi loborum lateralium terminantibus in parte inferiore instructo; c. 0.175 cm longo, fere 0.1 cm lato, 3nervium, costa prominente in facie inferiore, inexplanatum totum 0.275 cm, a basi 0.225 cm longum, 0.125 cm latum. *Gynostemium* breve, crassum, 3lobum, cum anthera bene 0.1 cm longum, clinandrio excavato, quadrangulo, pariete postico in lobum quadrangulum vix retusum producto, auriculis porrectis, anthera brevioribus, verticalibus, triangulis, brevissime acute acuminatis, margine antico obtusangule dilatatis. *Anthera* cucullata, ovato-suborbicularis, obtusa, c. 0.07 cm lata. *Pollinia* 4, valde inaequalia, in corpusculum oblique globosum unita, 0.05 cm longa, exteriora oblique obovato-orbicularia, extus convexa, intus plana, interiora minima, oblonga. *Stigma* alte excavatum, suborbiculare. *Pes gynostemii* cum ovario angulum obtusum faciens, vix incurvulus, linearis, truncatus, dimidio inferiore sub stigmate callo conspicuo longitudinali a latere viso oblique triangulo margine inferiore cum pede angulum subrectum faciente instructus, fere 0.2 cm longus. *Ovarium* obconicum, 6sulcatum, 0.24 cm longum; pedicellus tenuior, 0.35 cm longus.

SUMATRA. Padangsche Bovenlanden: Laras Talang, Goenoeng Talang, 1300 m, epiphytocal (H. A. B. BÜNNEMEIJER n.5659, 13 November 1918; "peduncle, bracts and flowers light orange, also leaf tinged orange-green, flowers fragrant").

This is a very interesting species on account of there being present distinctly four pollinia, although the inner ones are very minute. In most of the species belonging to this section, as far as I did see them, I could trace only 2 pollinia.

Description from herbarium and flowers preserved in alcohol.

***Thrixspermum* (sect. Orsidice) *sagoense* J. J. S. n. sp.**

Caulis dependens, apice incurvus, radicans, c. 14 cm longus. *Folia* c. 9, loriformia, inaequaliter acute bidentata cum mucrone lateraliter compresso interposito, costa media supra sulcata subtus carinata, sicco coriacea rugulosaque, c. 12.5—14 cm longa 1.2—1.75 cm lata; vaginae tubulosae, dorso carinatae, apice conduplicatae, sicco longitudinaliter prominenter nervosae transverseque rugosae, internodia superantes. *Inflorescentiae* saepe 2 superimpositae, vaginas 2 perforantes, valde multiflorae, diu flores gignentes, pedunculo c. 8—12.5

cm longo, vaginulis c. 4 brevibus superioribus laxioribus donato, rachide elongata, compressa, flexuosa, c. ad 31 cm longa, cum bracteis 1.15—1.25 cm lata, internodiis 0.25—0.275 cm longis facie florem versus spectante excavatis et acute marginatis. *Bractee* alternatim bifariae, margine inferiore patentes, margine superiore subpatentissimae, conduplicato-concavae, a latere visae oblique triangulae, incurvulae, valde carinatae, carina apice longe producta, basi subtus leviter triangulo-excavatae, margine superiore rachidem amplectente c. 0.675—0.7 cm longae. *Flores* ad c. 122, intervallis florentes. *Sepalum dorsale* oblongum, obtusum, concavum, 5nervium, tenue, fere 0.9 cm longum, bene 0.3 cm latum. *Sepala lateralialia* ad pedem gynostemii decurrentia, oblique oblonga, apice angustato obtusa, dorso ad apicem carinata, carina infra apicem apiculo terminata, 5nervia, tenuia, c. 0.86 cm longa, 0.45 cm lata. *Petala* anguste oblique oblonga, apicem versus paululum dilatata, obtusa, concava, 3nervia, c. 0.875 cm longa, basi 0.13 cm, superne 0.27 cm lata. *Labellum* apici pedis gynostemii insertum, porrectum, 3lobum, inter lobos laterales inconspicue late rotundato-saccatum, callo transverso lato retuso-bilobulo antice glabro postice parcius longe grosseque piloso intus ad basin lobi intermedii, costa longitudinali breviter pilosa a basi usque ad callum, a basi usque ad apicem lobi intermedii 0.53 cm, a sacco usque ad apicem loborum lateralium 0.7 cm metiens; lobi laterales erecti, oblique trianguli, falcutulo-incurvuli, obtusi, apice minute erosuli, intus magna parte convexi, extus concavi, margine postico leviter rotundato c. 0.52 cm longi; lobus intermedius porrectus, brevissime crasse calliformis, supra visus breviter late obtuse triangulus, a latere visus apice truncatus subtricrenatusque, c. 0.14 cm longus, 0.2 cm altus. *Gynostemium* breve, crassum, a latere visum subquadrangulum, supra visum suborbiculare, dorso convexum, apice truncatum, subtus bene concavum, absque anthera 0.16 cm longum, 0.3 cm latum, clinandrio parvo, suborbiculari, leviter concavo cum costula longitudinali. *Anthera* cucullata, supra visa subovalis, antice visa subsemiorbicularis, apice brevissime acute acuminata, tenuis, c. 0.17 cm lata. *Rostellum* parvum. *Stigma* parvum, alte excavatum, aequilateraliter trapeziforme. *Pes gynostemii* cum ovario et gynostemio angulos obtusos faciens, medio leviter obtusangule incurvulus, quadratus, valde concavus, c. 0.4 cm longus. *Ovarium* 6sulcatum, c. 0.55 cm longum.

SUMATRA. West coast: Goenoeng Sago, 1900 m, epiphytical in forest (H. A. B. BÜNNEMEIJER n.4033, 29 July 1918, "sepals light green, outside with a rose stain, lip white").

Allied to *Thr. simum* J. J. S. but differing in the much longer, less acuminate leaves, the peduncle being shorter than the leaves, much larger bracts, narrower sepals and petals, and the shape of the lip.

Description from herbarium and flowers preserved in alcohol.

***Thrixspermum* (sect. Orsidice) *brevibracteatum* J. J. S. n. sp.**

Caulis parum ramosus, rigidus, flexuosus, c. 38 cm longus, internodiis c. 1—1.7 cm longis, radicibus e caulis parte inferiore patentissimis. *Folia*

subpatentissima, brevia, oblongo-loriformia, apice inconspicue contracta, subinaequaliter rotundato-biloba, emucronata, sicco rigide coriacea, valde rugosa, nitida, c. 3.8—4.6 cm longa, sicco c. 1.2 cm lata; vaginae tubulosae, internodia superantes, apice oblique truncatae, sicco dorso carinatae nervisque longitudinaliter prominentibus, minute transverse rugulosae. *Inflorescentiae* 2 vaginas perforantes, 2—3 superimpositae, infima novella, patentissimae, adscendentes, folia superantes, laxe pluriflorae, pedunculo c. 4.5—5 cm longo, vaginulis c. 3 brevibus tubulosis donato, rachide flexuosa, acutangule quadrangula, c. 4—5 cm longa, cum bracteis 0.65 cm lata, internodiis facie florem versus spectante inferne excavatis, c. 4—0.45 cm, infimo c. 0.7 cm longis, 0.3 cm latis. *Bractee* alternatim bifariae, breves, patentes, rachidem semiamplexantes, triangulae, concavae, carinatae, absque carinae apice obtusae, dorso supra basin gibbosae, carnosulae, margine superiore c. 0.35 cm, margine inferiore c. 0.4 cm longae. *Flores* intervallis florentes. *Sepalum dorsale* subovale, rotundatum, basi leviter contractum, concavum, 5nervium, costa media dorso ad apicem incrassata, fere 1.1 cm longum, 0.6 cm latum. *Sepala lateral*ia ad pedem gynostemii decurrentia, oblique subovata, acutata, obtusa, concava, subseptemnervia, dorso versus apicem carinata, basi vix contracta, c. 1.2 cm longa, 0.83 cm lata. *Petala* e basi breviter contracta oblique ovata, obtusa, concava, 5nervia, c. 0.97 cm longa, 0.55 cm lata. *Labellum* apici pedis gynostemii insertum, porrectum, 3lobum, saccatum, callo glabro intus in flexu, ex apice lobi intermedius usque ad apicem ovarii fere 0.9 cm metiens, ex apice loborum lateralium usque ad apicem sacci 0.65 cm altum, 0.5 cm latum, sacco late rotundato, infra apicem leviter contracto, usque ad apicem pedis gynostemii c. 0.25 cm longo, fascia longitudinali pilosa intus a base usque ad basin calli; lobi laterales erecti, late rotundati, margine antico infra apicem leviter obtusangule dilatati et versus lobum intermedium incrassati, ante basin lobi intermedius contigui; lobus intermedius porrectus, cum sacco angulum obtusum faciens, carnosus, breviter ovatus, obtusus, supra obtusangule convexus basi elevatus calliformisque, subtus longitudinaliter canaliculatus, papillosus, c. 0.35 cm longus. *Gynostemium* brevissimum, crassum, antice visum aequilateraliter trapeziforme, truncatum, absque anthera c. 0.225 cm longum, sensim in pedem gynostemii abiens, clinandrio leviter concavo cum incrassatione convexa suborbiculari. *Stigma* transverse fissuriforme. *Pes gynostemii* cum ovario angulum obtusum faciens, quadratus, concavus, marginibus inferne incurvis in gynostemium abiens, c. 0.35 cm longus. *Ovarium* teres, 6sulcatum, c. 0.675 cm longum.

SUMATRA. West coast: Laras Talang, Goenoeng Talang, 2000 m, forest (H.A.B. BÜNNEMEIJER n. 5227, 28 October 1918; "flowers yellow, stem brownish"). Goenoeng Malintang, 2100 m, copsewood (H.A.B. BÜNNEMEIJER n. 3938, 24 July 1918; "flowers yellow"). Goenoeng Kerintji, 2200 m, epiphytcal in forest (H.A.B. BÜNNEMEIJER n. 10097, 6 May 1920; "flowers yellow").

In the lax racemes with rather small bracts this resembles *Thr. remotiflorum* J.J.S. but in the characteristics of the flowers it is totally distinct.

The description was drawn only from n. 5227. In n. 10097 the leaves are longer (6—6.8 cm), the inflorescences single, the sac of the lip shorter.

Description from herbarium and part of an inflorescence preserved in alcohol.

Thrixpernum (sect. Orsidice) **gombakense** J.J.S. n. sp.

Caulis elongatus, scandens, rigidus, subteres, sectione transversa vix ovalis, 0.25 cm latus, internodiis c. 3—5 cm longis, radicibus solitariis, vaginam dorso supra inflorescentias perforantibus. *Folia* patentissima, oblonga, apice recurvo contracta, suboblique obtusa, biloba, basi non cordata, supra in utraque parte costae mediae canaliculatae convexa, carnosio-coriacea, c. 3—4 cm longa, 1.1—1.3 cm lata; vagina tubulosa, internodio brevior, apice antice rotundato-excisa, c. 1.8—2.2 cm longa. *Inflorescentiae* 1—2 superimpositae, infima novella, vaginam dorso ad basin perforantes, patentissimae, curvatae, brevissimae, 1—2 florum, pedunculo c. 1.5 cm longo, vaginulis c. 4 brevibus tubulosis donato. *Bractae* rachidem semiamplectentes, valde concavae, triangulae, acutae, dorso carinatae, margine superiore c. 0.43 cm, dorso 0.275 cm longae. *Flores* satis conspicui. *Sepalum dorsale* oblongum, apice breviter acutatum, obtusum, dorso ad apicem breviter longitudinaliter incrassatum, basi brevissime contractum, concavum, 3nervium, nervis exterioribus basi furcatis, c. 2.1 cm longum, 0.8 cm latum. *Sepala lateral*ia oblique ovato-oblonga, apicem versus angustata, acutiuscula, basi brevissime contracta, concava, superne canaliculata, 5nervia, costa media leviter sigmoidea dorso praesertim versus apicem incrassatula, c. 1.9 cm longa, 0.97 cm, basi 0.47 cm lata. *Petala* oblique oblongo-elliptica, margine antico supra basin rotundato-dilatata, obtusa, basi distincte contracta, concava, 3nervia, nervis exterioribus basi furcatis, c. 1.7 cm longa, 0.775 cm, basi 0.325 cm lata. *Labellum* apici pedis gynostemii insertum, breviter saccatum, 3lobum, ex apice lobi intermedii usque ad apicem ovarii bene 1.2 cm longum, ex apice loborum lateralium usque ad apicem sacci 0.95 cm metiens, callo glabro intus in flexu inter saccum et lobum intermedium; lobi laterales erecti, incurvuli, gynostemium amplectentes, late falcato-trianguli, margine postico superne valde rotundati erosulo-crenulatique, concavi, sinu late rotundato a lobo intermedio separati; lobus intermedius satis conspicuus, porrectus, cum sacco angulum obtusum faciens, carnosus, dimidio inferiore bene concavo-excavatus, parte superiore crasse conicus cum canalicula longitudinali supra ad basin obtusus, supra visus ovato-triangulus, subtus subplanus, omnino minute papillosus, c. 0.65 cm, subtus usque ad flexum 0.675 cm longus, 0.575 cm latus, saccus rotundatus, pariete postico pedem gynostemii continuus, intus pilosus, dorso 0.36 cm longus. *Gynostemium* breve, crassum, dorso convexum cum sulcis 2 longitudinalibus, apice subgibbosum, marginibus sensim in pedem gynostemii abiens, limite sinu inconspicuo brevissime bilobulatum, cum anthera c. 0.36 cm, absque anthera 0.25 cm longum, clinandrio truncato, rotundato-triangulo-trilobulato cum incrassatione canalicula limitata.

Anthera cucullata, transverse rotundato-quadrangula, apice late truncata, medio vix recurvula, c. 0.26 cm lata. *Pollinia* 4, a dorso compressa, oblique oblonga, apice rotundata, basi oblique truncata, c. 0.16 cm longa, 2 antica recurvula antice convexa, 2 postica minora tenuioraque, stipite brevi, lato, convexo cum marginibus incurvis, apice sinu rotundato obtuse bilobulo paulo latiore quam longo, cum glandula semilunata c. 0.08 cm longo, 0.1 cm lato. *Stigma* transverse fissuriforme. *Pes gynostemii* cum ovario angulum rectum faciens, rectus, quadratus, apice a sepalis lateralibus liber, marginibus gynostemium versus valde dilatatis valde concavus, c. 0.4 cm longus. *Ovarium* 6sulcatum, c. 0.83 cm longum.

SUMATRA. Padangsche Bovenlanden: Laras Talang, Boekit Gombak, 1800 m, epiphytical in forest (H. A. B. BÜNNEMEIJER n. 5434, 3 November 1918; "flowers white").

Very similar to *Th. cordulatum* J. J. S. but with oblong not cordulate leaves, longer sheaths and internodes, a different lip and column.

Description from herbarium and material preserved in alcohol.

***Pennilabium lampongense* J. J. S. n. sp.**

Caulis brevis, sicco flexuosus, c. 3.2 cm longus, internodiis c. 0.25 cm longis, radicibus elongatis tenuiusculis. *Folia* c. 6, oblique lanceolata, falcata, apice angustata, oblique obtuse 2lobula vel dente brevissimo acuto, basi valde angustata, costa media dorso carinata, sicco tenuiter papyracea semipellucidaque, c. 4.6—6.5 cm longa, 0.95—1.15 cm lata; vaginae breviter tubulosae. *Inflorescentiae* vaginas 2 perforantes, foliis multo breviores, intervallis florem gignentes, pedunculo c. 0.7 cm longo, nonnullis vaginulis brevibus donato, rachide crassiore, flexuosa, lateraliter compressa, 1 cm superante, internodiis facie florem versus spectante triangulo-excavatis, sectione transversa acutangule quadrangulis, c. 0.125 cm longis (in spiritu vini). *Bractee* alternatim bifariae, patentes, rachidem semiamplectentes, concavae, triangulae, carinatae, carina ultra apicem in apiculum lateraliter compressum triangulum acutum producta, margine superiore c. 0.175 cm longae. *Sepalum dorsale* e basi breviter unguiculato-contracta oblongo-ellipticum, obtusum, basi excepta concavum, 3nervium, c. 0.625 cm longum, 0.26 cm latum. *Sepala lateral*ia apice recurva, oblique subrhombico-oblonga, prasertim basin versus angustata, obtusa, basi excepta concava, dorso ad apicem carinata, 3nervia, fere 0.6 cm longa, 0.3 cm lata. *Petala* oblique subobovato-elliptica, obtusa, basin versus valde angustata, leviter concava, 3nervia, c. 0.56 cm longa, 0.2 cm, basi 0.05 cm lata. *Labellum* basi gynostemio breviter adnatum, 3lobum, calcaratum, a basi usque ad apicem lobi intermedi c. 0.36 cm longum; lobi laterales porrecti, divergentes, decurvuli, concavi, oblique subspathulato-obovati, obtusi, margine interiore rotundati, margine exteriori rotundato-angulati et basi excepta erosuli, c. 0.4 cm longi, 0.275—0.28 cm lati, basi contracti; lobus intermedius parvus, porrectus, carnosus supra visus subquadrangulus (apice leviter mancus), supra concavus, subtus angulato-convexus,

subcymbiformi-calliformis, c. 0.1 cm longus, appendice brevior porrecta triangula conduplicato-canaliculata intus ad basin; calcar elongatum, leviter sigmoideum, subteres, subclavatum, obtusum, c. 0.85 cm longum. *Gynostemium* brevissimum, a dorso compressum, basi dilatatum, dorso convexo leviter sigmoideum, constrictione utrinque infra clinandrium 3lobulum, c. 0.18 cm longum, clinandrio excavato, suborbiculari. *Anthera* cucullata, ambitu reniformi-triangula, satis plana, in rostrum breve latiusculum truncatum convexum contracta, c. 0.13 cm lata. *Pollinia* 2, oblique subglobosa, foraminulata, stipite spathulato, apice dilatato inflexo tridentato, late lineari, antice convexo glandula parva. *Rostellum* elongatum, porrectum, incurvulum, lineare, apice bidentatum. *Stigma* in gynostemii parte inferiore, suborbiculare, concavum. *Ovarium* trigonum, c. 0.65 cm longum. *Capsula* elongata, tenuis, immatura 4.5 cm longa.

SUMATRA. Lampoenigs: Slope of Goenoeng Rate Telanggoran, c. 400 m, epiphytical in forest (IBOET n.96, 16 November 1921; "flowers light yellow").

A near ally of *P. Angraecum* (RIDL.) J.J.S. but with a differently shaped lip, especially midlobe, and anther, a much shorter stipe and rostellum.

Description from a dried specimen and a flower preserved in alcohol.

***Pennilabium longicaule* J.J.S. n. sp.**

Caulis elongatus, dependens, apice incurvus, ramosus, tenuiusculus, c. 20–25 cm longus, foliatus, internodiis c. 0.5–0.8 cm longis. *Folia* patentia ad subpatentissima, basi semitorta, lanceolata, saepe falcata, apicem versus angustata, valde inaequaliter bidentata, basi oblique obtusa ad rotundata, costa media dorso carinata, sicco rigide papyracea semipellucidaque, c. 3.8–6.8 cm longa, 1–1.35 cm lata; vaginae tubulosae, internodia subaequantur. *Inflorescentiae* vaginam dorso ad basin perforantes, saepe 2 superimpositae, erecto-patentes, diu flores gignentes, pedunculo angulato, c. 3–4 cm longo, vaginulis c. 2–3 brevibus tubulosis donato, rachide leviter flexuosa, sectione transversa quadrangula, ad c. 4.5 cm longa, internodiis c. 0.3–0.175 cm longis, facie florem versus spectante excavatis acuteque marginatis. *Bractee* alternatim bifariae, patentes, triangulae, conico-apiculatae, basi rachidem semiamplectentes, concavae, dorso carinatae, margine denticulatae, dorso c. 0.175 cm longae. *Flores* ad c. 23, intervallis florentes, cum calcaribus c. 1.55 cm longis, sepalis petalisque conniventibus (an semper?). *Sepalum dorsale* elliptico-oblongum, obtusum, longius conico-apiculatum, concavum, 3nervium, costa media dorso versus apicem incrassata, c. 0.95 cm longum, bene 0.3 cm latum. *Sepala lateralalia* oblique subrhombeo-oblonga, acutiuscula cum mucrone longiusculo lateraliter compresso acuto, dorso praesertim versus apicem carinata, concava, 3nervia, c. 0.9 cm longa, 0.35 cm lata. *Petala* oblique spathulato-lanceolata, obtusa, dorso ad apicem obtuse apiculata, basi $\frac{1}{3}$ longitudinis contracta, unque excepto repandula, concava, dorso obtuse carinata, 3nervia, c. 0.825 cm longa, 0.225 cm, basi

fere 0.1 cm lata. *Labellum* 3lobum, calcaratum, a basi usque ad apicem lobi intermedi 0.5 cm longum, ab apice loborum lateralium usque ad apicem calcaris c. 1.2 cm metiens, explanatum fere 0.7 cm latum; lobi laterales basi valde obliqua inserti, usque ad basin labelli decurrentes, oblique porrecti, angulum anguste acutum facientes, basi subhorizontales, supra basin incurvi, e basi oblique quadrangula cuneato-dilatati, apice late rotundato tenuiter fimbriati, basi oblique convexi, ceterum concavi; lobus intermedi minor, porrectus, carnosus, triangulus, subacutus, carina altissima longitudinali lateraliter compressa carnosae apicem versus decrescente a latere visa triangula basi in sinum inter lobos laterales quadrante triquetra, c. 0.2 cm longus; calcar cum ovario angulum acutum cum lobo intermedio angulum obtusum faciens, elongatum, lateraliter compressum, lineare, apicem versus angustatum, obtusum, recurvulum, acinaciforme, c. 0.775 cm longum, fauce vallo altissimo basi gynostemio adnato 3lobulato irregulariter marginato circumdatum, lobulis basilaribus recurvis convexis obtusis, lobulo intermedio transverse quadrangulo concavo margine antico truncato vix retuso irregulariter marginato. *Gynostemium* breve, a dorso compressum, dorso convexo leviter sigmoideum, supra basin contractam labello basi subtus adnatam utrinque valde rotundato-dilatatum, c. 0.3 cm longum, clinandrio angulato, leviter concavo. *Anthera* cucullata, e basi 3loba (thecis convexis rotundatis cum connectivo crasse gibbosa) in rostrum conspicuum triangulum apicem versus angustatum breviter acute bidentatum convexum producta, c. 0.15 cm lata, fere 0.2 cm longa. *Pollinia* 2, subglobosa, impressione munita, c. 0.06 cm diam., stipite spathulato, apice dilatato plicis cruciformi-tridentato, parte inferiore lineari basin versus angustato convexo, cum glandula parvula oblonga c. 0.16 cm longo. *Rostellum* longissimum, deorsum spectans, rectum, in faucem calcaris quadrans, linearis, in lacinias 2 tenues angustas acutas partitum, antheram superans. *Stigma* magnum, faciem inferiorem gynostemii magnam partem occupans, transverse ovale, lobulo brevi rotundato in margine inferiore, utroque latere margine rotundato tenue. *Ovarium* trigonum, 6sulcatum, 0.75 cm longum. *Capsula* elongata, teres, tenue, rostratum, c. 7—7.2 cm longum, 0.325 cm diam., pedicello 0.4—0.6 cm longo.

SUMATRA. West coast: Goenoeng Kerintji, epiphytically in forest (H. A. B. BÜNNEMEIJER n.9597, 19 April 1920, 1800 m; n.9925, 2 May 1920, 2400 m, "flowers light green"; n.10070, 5 May 1920, 2200 m; n.10312, 8 May 1920, 2000 m, "flowers light yellow, lip white").

An interesting plant, easily distinguished from the other species of the genus hitherto described by the long stems.

The specimen collected under n.10070 is stronger, the stem attaining a length of 34 cm with the leaves oblong-ovate, 6—6.5 cm long and 1.5—2.1 cm broad.

Description from herbarium and part of an inflorescence preserved in alcohol.

Trichoglottis simplex J. J. S. n. sp.

Caulis elongatus, dependens, apice incurvus, plus minusve ramosus, rigidus, flexuosus, c. 37—64 cm longus, internodiis c. 1.5—2.5 cm longis. *Folia* patentissima; oblonga ad lorato-lanceolata, apice longitudine c. 0.7—2.75 cm saepe leviter contracta, inaequaliter obtuse vel rotundato-biloba cum mucrone brevi crasso interposito, costa media dorso non prominente, crasse carnosae, c. 2.9—9.5 cm longae, 0.9—1.9 cm latae; vaginae tubulosae, longitudinaliter costulatae, transverse rugulosae. *Inflorescentiae* vaginam dorso ad basin perforantes, ad c. 4 superimpositae, approximatae, infima novella, brevissimae, subsessiles, c. 3—4 florum, rachide flexuosus, c. 0.55—0.6 cm longa, internodiis c. 0.175—0.3 cm longis, facie florem versus spectante applanatis, facie opposita superne convexo-incrassatis. *Bracteae* alternatim bifariae, minutae, adpressae, triangulae, concavae. *Flores* parvuli, carnosuli, c. 1 cm lati, 1.1 cm longi. *Sepalum dorsale* subspathulato-oblongum, obtusum, apice incurvulum, marginibus tenuibus incurvulis concavum, dorso convexum, superne subirregulariter marginatum, 3nervium, c. 0.5 cm longum, fere 0.2 cm latum. *Sepala lateralibus* oblique lanceolata, superne angustata, anguste obtusa, margine antico basi obsolete lobato-dilatata, intus subplana, dorso medio longitudinaliter incrassata, 3nervia, carnosae, c. 0.6 cm longae, 0.175 cm latae. *Petala* oblique anguste oblonga, vix spathulata, obtusa, intus plana, dorso convexa, 3nervia, c. 0.5 cm longa, 0.175 cm lata. *Labellum* basi gynostemio adnatum, breviter calcaratum, carnosum, recurvum, simplex, magnam partem e lobo intermedio, inexplatum usque ad apicem ovarii c. 0.675 cm longum, parte inferiore gynostemio adnata c. 0.25 cm longa, marginibus erectis in formam costularum longitudinalium antice dilatatarum breviter in basin lobi intermedii productis, lobo intermedio decurvo, satis conspicuo, oblongo-elliptico, basi angustato, apice lato late rotundato-retuso, subtus convexo cum excavatione inconspicua in medio, infra apicem more *Dendrobii* sect. *Oxystophylli* convexo-callosa-incrassata, supra marginibus incurvulis repandulo-crenulatis basi excepta ciliolatis concavo, callo longitudinali truncato in basi, parte mediana longitudinali convexo et omnino usque in calcar villosulo, c. 0.5 cm longo, 0.35 cm lato, calcaris brevi, reverso, ovario adpresso, a latere viso rotundato-conico, supra viso ovali rotundato, c. 0.2 cm longo, lamella e calcaris pariete postica porrecta horizontali faucem calcaris obtegente, apicem versus angustata, obtusa, tenui, puberula. *Gynostemium* brevissimum, crassum, dorso excavatum, basi incrassatum, apice truncatum, velutinum, absque anthera c. 0.225 cm longum, clinandrio transverse ovali, leviter concavo cum costula humili longitudinali, auriculis brevibus triangulis dentiformibus obtusis puberulis. *Pollinia* 4, inaequalia, in corpuscula 2 subglobosa c. 0.075 cm diam. unita, stipite spathulato, parvo, apice recurvo. *Rostellum* brevissimum, bidentatum. *Ovarium* pedicellatum tortuosum, trigonum cum costa convexa in lateribus, 6sulcatum, c. 0.9 cm longum. *Capsula* flore coronata, triquetra cum costa in lateralibus, c. 4.7 cm longa, pedicello 0.75 cm longo.

SUMATRA. West coast: Goenoeng Merapi, epiphytial in forest and coffee-plantations (H.A.B. BÜNNEMEIJER n. 4721, 20 September 1918, 1300 m, "flowers light brown, dotted somewhat darker, lip white"; n. 4859, 23 September 1918, 1200 m, "flowers greenish brown inside dotted red-brown, lip white"; n. 5029, 4 October 1918, 1200 m, "flowers greenish, inside dotted brown, lip white"). Laras Talang, Goenoeng Talang, 1600 m, epiphytial in forest (H.A.B. BÜNNEMEIJER n. 5230, 28 October 1918; "sepals and petals light green dotted brown, lip white"). Solok, Danau di Baroeh (A. V. THEUNISSEN, cult. in Hort. E. JACOBSON, Fort de Kock, sub n. 1922; "leaves green, yellowish green somewhat suffused with purplish brown when old, bracts light green suffused with purplish brown, pedicel and ovary light yellowish green suffused with light brown, sepals and petals transparently light yellowish brown, dotted light brown inside, lip wax-white, spur transparently with tinged light brown, column transparent, light brown base light brownish yellow, anther transparently light yellow, pollinia yellow").

This species has the short flexuose few-flowered inflorescences of *T. lanceolaria* BL., *T. flexuosa* ROLFE, *T. papuana* SCHLTR., etc. but it is quite distinct in every other respect.

Description from herbarium and materials preserved in alcohol.

***Trichoglottis angusta* J. J. S. n. sp.**

Caulis elongatus, ramosus, radicans, serpentinus, subteres, pars adest 48 cm longa, sicco 0.4 cm diam., internodiis c. 2.5—3 cm longis, radicibus 1—2 e nodis, vaginam lateraliter perforantibus, si 2 adsunt oppositis. *Folia* subpatentissima, oblongo-loriformia, apice interdum leviter contracta, breviter inaequaliter rotundato-biloba, basi breviter conduplicata, sicco coriacea, c. 6.25—7.5 cm longa, 1.25—1.7 cm lata; vaginae tubulosae, apice antice excisae, sicco prominenter nervosae. *Inflorescentiae* numerosae, ad c. 8 supra et infra nodos, longitudinaliter biseriales, brevissimae, 1florae, nonnullis vaginulis brevissimis donatae. *Flos* mediocris, maceratus c. 2.15 cm longus. *Sepalum dorsale* sublineari-spathulatum, basin versus sensim angustatum, anguste obtusum, c. 1.175 cm longum, 0.25 cm latum. *Sepala lateralialia* deflexa, oblique lanceolato-linearialia, leviter sigmoidea, in $\frac{2}{3}$ supra basin latissima, obtusa, obtuse conico-apiculata, margine antico basi breviter triangulo-dilatata, c. 1.15 cm longa, basi 0.225 cm, supra basin 0.17 cm, superne 0.225 cm lata. *Petala* reflexa, oblique linearialia-spathulata, obtusa, vix apiculata, convexa, c. 1.225 cm longa, basi 0.075—0.08 cm, superne 0.17—0.18 cm lata. *Labellum* basi gynostemii longitudine c. 0.3 cm adnatum, 3lobum, calcaratum, inexplanatum c. 1 cm longum, parte libera c. 0.6 cm longa, unguiculata, ungue cum gynostemio angulum acutum faciente, brevi, obtus-angule recurvo, canaliculato, subtus convexo, carnosum, intus nonnullis pilis longis instructo; lobi laterales ad apicem unguis, minimi, incurvi, subulati; lobus intermedius multo major, 3lobulus, carnosus, lobulis lateralibus irregulariter quadrangulis, erectis, lobulo intermedio subtereti, apice recurvo

lateraliter compresso intus convexo-incrassato et verruculoso; calcar reversum, rectum, teres, obtusum, c. 0.425 cm longum, pariete postico basi lamella porrecta horizontali lineari apice obverse triangulo-dilatata, apice leviter rotundato-excisa tubum labelli aequante instructum. *Gynostemium* satis gracile, dorso convexo leviter sigmoideo costa longitudinali praeditum (maceratum), apicem versus dilatatum, superne minute puberulum, subtus dense velutino-papillosum, c. 0.36 cm longum, clinandrio leviter concavo cum costula longitudinali, pariete postico cum gynostemii parte inferiore angulum obtusum faciente, auriculis porrectis, parallelis, brevius triangulo-subulatis, acutis, puberulis. *Anthera* cucullata, ambitu quinquangularis, basi truncata, apice in rostrum breve apice recurvulum obtusum producta, rostro excepto puberula, connectivo obtuse gibboso antice in crura 2 divergentia convexa decurrente, c. 0.17 cm lata. *Pollinia* in corpuscula 2 subglobosa unita, stipite brevi, oblongo, convexo, glandula subovata, convexa. *Ovarium* pedicellatum curvatum, tortum, trigonum, 6sulcatum, c. 0.7 cm longum.

SUMATRA. West coast: Goenoeng Merapi, 1200 m, edge of forest (H. A. B. BÜNNEMEIJER n. 5064, 7 October 1918; "flowers light green, almost light yellow, lip with a yellow blotch in the centre").

A near ally of *T. scandens* J.J.S. and especially of *T. adnata* J.J.S. with which *T. Heidemaniana* SCHLTR. seems to be identical. It differs from *T. adnata* in the larger flowers, narrower sepals and petals, the shape of the lip which has the midlobe nearly terete in the upper part and the puberulous anther. *T. scandens* has a much broader spur retuse at the apex and broader sepals and petals.

T. adnata was described from a cultivated plant with blotched sepals and petals; afterwards I have also seen specimens without blotches on the sepals and petals.

Description from a dried specimen.

***Sarcanthus callosilobus* J.J.S. n. sp.**

Caulis elongatus, simplex, rigidus, plus minusve flexuosus, teres, basi tantum radicans, c. 18—30 cm longus, internodiis 1—1.5 cm longis. *Folia* subpatentissima, saepe subrecurvula, loriformia, apice late oblique obtusa vel leviter obtuse biloba cum apiculo brevi crasso conico, canaliculata, costa media supra sulcata, carnosa, sicco rigida, c. 5—7.8 cm longa, 0.7—1 cm lata; vaginae tubulosae, internodia aequantes, valde transverse verrucoso-rugosae. *Inflorescentiae* vaginam dorso ad basin perforantes, foliis multo longiores, paniculatae, subaxe multiflorae, c. 18—25 cm longae, pedunculo c. 4.5—8.5 cm longo, vaginulis c. 2—3 brevissimis tubulosis donato, ramulis (absque ramulo ultimo) c. 4—5, subsessilibus, c. 4.5—6 cm longis, ramulo ultimo 7—8.5 cm longo, rachide angulata. *Bractee* patentissimae, parvae, triangulae, concavae, c. 0.1 cm longae. *Flores* parvi, quaquaversi, patentissimi, carnosuli, c. 0.48 cm longi, 0.4 cm lati, sepalis petalisque conniventibus. *Sepalum* dorsale ovario continuum, apice incurvulum, valde concavum, ovali-

oblongum, obtusum, intus in parte inferiore parce vel parcissime minute muriculatum, 3nervium, c. 0.27 cm longum, 0.14 cm latum. *Sepala lateralialia* porrecta, divergentia, labello subadpressa, oblique subobovata, brevissime acuminata, obtusa, concava, costa media dorso obtuse incrassata, intus parce vel parcissime minute fusce muriculato-puberula, dorso minute papillosa, 3nervia, fere 0.3 cm longa, 0.2 cm, basi 0.125 cm lata. *Petala* porrecta, gynostemio adpressa, oblique elliptica, obtusa, suberosula, leviter concava, intus ad basin parcissime muriculato-puberula, 3nervia, c. 0.25 cm longa, fere 0.15 cm lata. *Labellum* 3lobum, calcaratum, a basi usque ad apicem lobi intermediarii fere 0.3 cm longum, ab apice loborum lateralium usque ad apicem calcaris 0.38 cm metiens; lobi laterales ad faucem calcaris erecti, oblique porrecti, oblique trianguli cum margine postico rotundati (vel oblique subquadranguli, apicem versus angustati et angulo postico rotundati), intus margine postico lato excepto carnosio-incrassati, incrassationibus cum incrassatione alta intus infra basin lobi intermediarii callum magnum postice longiuscule patentissime grosse pilosum formantibus; lobus intermedius supra basin recurvus, ceterum rectus, oblongo-quadrangulus, apicem versus angustatus, dimidio superiore plus minusve contractus tenuisque, apice truncato denticulatus vel bidentatus, dimidio inferiore supra valde transverse convexo-callosio-incrassatus, c. 0.15 cm longus, 0.08 cm latus; calcar deorsum spectans, cum ovario angulum acutum faciens, amplum, subglobosum, rotundatum cum costa valida crassa longitudinali ad apicem calcaris altissima, callo conspicuo transverso introrso intus in pariete postico ad basin, c. 0.25 cm longum, 0.23 cm latum. *Gynostemium* breve, basi contractum et utraque margine plica instructum, dorso convexum, cum anthera c. 0.15 cm longum, clinandrio satis conspicuo, apicali, rotundato, semiovali, concavo cum costula longitudinali, auriculis porrectis, dentiformibus. *Anthera* cucullata, ambitu subovata, e basi rotundato-quadrangula costula longitudinali instructa in rostrum quadrangulum basi fere aequilatum apicem versus angustatum truncatum subretusum supra concavum subtus convexum producta, c. 0.08 cm lata, fere 0.125 cm longa. *Pollinia* 4, a dorso compressa, oblique oblonga, curvula, antice convexa, tenuia, c. 0.05 cm longa, stipite spathulato, supra basin recurvo, apice inflexo cucullato, cum glandula conspicua quadrangula postice spurie bilobula convexa c. 0.075 cm longo. *Rostellum* conspicuum, antice breviter late obtuse 3lobulum (3crenatum), auriculis bene brevius, postice valde carnosio-triangulum, obtuse 2lobulum. *Stigma* parvum, sub rostello transverse fissuriforme. *Ovarium* breve, crassum, leviter tortum, 6sulcatum, c. 0.2 cm longum.

SUMATRA. Padangsche Bovenlanden: Laras Talang, Goenoeng Talang, 1450 m, road side (H.A.B. BÜNNEMEIJER n. 5697, 14 November 1918; "peduncle greenish violet, sepals and petals yellowish green, lip light green and yellow"). Solok, Alahan Pandjang (W. GROENEVELDT, cult. in Hort. E. JACOBSON, Fort de Kock, sub n.4; "peduncle dark green mottled brownish purple, ovary dark brownish purple, sepals and petals transparently dark yellow with a greenish tinge, suffused with brownish purple, lip midlobe

brimstone yellow, side-lobes light orange-yellow, spur transparently light yellow, column yellowish green suffused with brownish purple, anther dirty white with dark purple markings").

In general habit this species recalls one of *S. montanus* J. J. S. from Java, which also possesses very small flowers. These are, however, especially in the structure of the lip, very distinct.

Description from herbarium and materials preserved in alcohol of BÜNNE-MEIJER n.5697, completed from a panicle preserved in alcohol of JACOBSON n.4.

Taeniophyllum (sect. *Codonosepalum*) **triangulare** J. J. S. n. sp.

Planta pusilla, radicibus c. 7—9, substrato adpressis, flexuosis, valde complanatis, ad c. 4.3 cm longis, 0.14—0.27 cm latis. *Inflorescentiae* brevissimae, pauciflorae, pedunculo tenui, c. 0.3—0.4 cm longo, glabro, rachide flexuosa, c. 0.225 cm longa, internodiis c. 0.075 cm longis. *Bractee* alternatim bifariae, patentes triangulae, apice incurvulo-apiculatae, concavae, carinatae, c. 0.07 cm longae. *Flores* c. 5—6, parvi, c. 0.25 cm longi, sepalis petalisque circiter usque ad medium in tubum subtus fissum explanatum c. 0.2 cm longum 0.23 cm latum connatis, praesertim partibus liberis carnosulis, 1nerviis. *Sepalum dorsale* totum 0.2 cm longum, parte libera ovato-trianguula, obtusa, c. 0.1 cm longa, 0.07 cm lata. *Sepala lateralialia* c. 0.175 cm longa, parte libera oblique ovato-trianguula, obtusa vel subapiculata, 0.08 cm longa, 0.06 cm lata. *Petala* 0.175 cm longa, parte libera oblique ovata, obtusa, c. 0.08 cm longa, 0.05 cm lata. *Labellum* calcaratum, totum fere 0.25 cm longum; lamina concava, apice recurvula, ambitu triangula, subtriloba, basi membrana transversa excavatione transversa instructa, 5nervia, nervis exterioribus in c. $\frac{1}{3}$ supra basin binis confluentibus, c. 0.16 cm longa, 0.1 cm lata, lobulis lateralibus erectis, subrotundatis, humilibus, lobo intermedio triangulo, apice recurvulo, brevissime contracto, obtuso et supra vix infra apicem seta brevi reversa donata, c. 0.1 cm longo, 0.075 cm lato; calcar reversum, subglobosum, fauce membrana transversa infra gynostemium excisione bilobula clausum, c. 0.07 cm longum, 0.08 cm latum. *Gynostemium* brevissimum, dorso convexum, totum 0.075 cm longum, clinandrio concavo, brachiis stigmaticis porrectis, apicem gynostemii bene superantibus, parallelis, in excavationem basilarem labelli quadrantibus, oblongis, obtusis, extus convexis, intus concavis. *Anthera* cucullata, ambitu subquadrilobulata. *Pollinia* 4, globoso-obovoidea. *Rostellum* brachiis multo brevius, bilobulum. *Ovarium* c. 0.08 cm longum; pedicellus paulo tenuior, 0.03 cm longus. *Capsula* cylindrico-oblonga, basi apiceque obtusa, c. 0.48 cm longa, 0.225 cm diam., pedicello 0.05 cm longo.

SUMATRA. West coast: Batang Paloepeoh, 1000 m, growing on an *Araliaceae* (E. JACOBSON n. 2231, February 1925; "flowers light green").

This is apparently nearly related to *T. merapiense* SCHLTR. It has, however, much shorter inflorescences, smaller flowers, differently shaped sepals, petals and anther, and a glabrous column. Moreover it has been collected at a much lower altitude.

Description from 2 specimens preserved in alcohol.

Taeniophyllum (sect. *Codonosepalum*) **Jacobsonii** J. J. S. n.sp.

Planta pusilla, caule abbreviato, radicibus substrato adpressis, teretibus subtus vix applanatis, partim semiteretibus. *Inflorescentiae* brevissimae, multiflorae, diu flores gignentes, aurantiaco-brunneae, pedunculo punctis minutis acute conicis aspero, c. 0.15 cm longo, rachide valde flexuosa, compressa, sectione quadrangula, aspera, c. 0.35 cm longa, internodiis c. 0.04—0.05 cm longis. *Bractae* patentissimae, triangulae, acutae, dorso carinatae, carina ultra apicem producta, concavae, usque ad bene 0.075 cm longae. *Flores* parvi, alternatim bifarii, intervallis florentes, carneo-brunnei, subaurantiaci, c. 0.34 cm longi, 0.25 cm lati, sepalis petalisque fere usque ad medium in tubum subtus fissum explanatum c. 0.25 cm longum 0.27 cm latum connatis, partibus liberis divergentibus, carnosulis. *Sepalum dorsale* c. 0.24 cm longum, parte libera oblongo-triangu- la, subobtusum, c. 0.125 cm longa, 0.06 cm lata. *Sepala lateralia* 0.25 cm longa, parte libera oblique oblongo-triangu- la, subobtusum, 0.125 cm longa, 0.06 cm lata. *Petala* c. 0.24 cm longa, parte libera oblique ovato-triangu- la, leviter acuminata, acuta, bene 0.1 cm longa, 0.075 cm lata. *Labellum* calcaratum, simplex, totum c. 0.26 cm longum; lamina porrecta, vix recurvula, simplex, concava, subtus convexa, triangula, subobtusum vel acutiusculum, seta subulata parvula reversa cum lamina angulum acutum faciente supra infra apicem, excavatione transversa membrana transversa medio rotundato-excisa breviter reverse bidentata partim oblecta ad basin, carnosula, c. 0.16 cm longa, 0.08 cm lata; calcar reversum, ovario adpressum, oblique ovoideo-globosum, rotundatum, basi utrinque conspicue constrictum, fauce membrana transversa magna parte clausum, c. 0.07 cm longum. *Gynostemium* brevissimum, aurantiaco-brunneum, c. 0.1 cm longum, clinandrio alte excavato, brachiis stigmaticis porrectis, subparallelis, in excavationem basilem labelli quadrantibus, elongatis, subspathulato-oblongis, rotundatis, concavis, extus convexis, pallidis. *Anthera* cucullata, ambitu subquadrata, subaequaliter 4lobulata. *Pollinia* 4, subaequalia, oblique obovoidea, dilute flava, cum stipite brevissimo albo et glandula brevi valde dilatata alba 0.04 cm longa. *Rostellum* remote bidentatum. *Ovarium* teres, aurantiaco-brunneum, c. 0.16 cm longum. *Capsula* brevissime pedicellata, subcylindrico-oblonga, costis 3 sulcisque 3 longitudinalibus, curvula, aurantiaco-brunnea ad atro fusca, nitida, rugulosa, c. 0.4—0.9 cm longa.

SUMATRA. West coast: Agam, Fort de Kock, growing on *Psidium Guajava* L. in full sun (E. JACOBSON nrs. 411 and 1402, 28 August 1917 and 27 April 1918).

Resembling also in the colour *T. aurantiacum* J. J. S. from Java, but with a much more flexuose rachis, relatively longer bracts, smaller flowers, relatively broader sepals and petals connate higher up, a nearly equally four-lobed anther.

Description from living specimens sent by Mr. JACOBSON.

Utrecht, April 1928.

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